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ABSTRACT

The purpose of this project was to develop a process that would reduce the attrition rate of adult basic education students entering occupational programs. To accomplish this goal, adult basic education students in occupational programs, adult basic education students who had dropped out of occupational programs, and their instructors were interviewed to determine their perceptions of the difficulties faced by adult basic education students in an occupational program. The results of these interviews show a need to focus on basic skills, study skills, career awareness and personal social skills. The results of the interviews were used to develop a procedure manual for analyzing an occupational program in welding. (The survey instruments and the sample process manual for welding are appended.) (LRA)

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ED189287

FINAL REPORT
Project No. 19-002-146-138

DEVELOPMENT OF A MECHANISM AND STANDARDS FOR THE ASSESSMENT OF ADULT BASIC EDUCATION STUDENTS AS THEY RELATE TO POST-SECONDARY VOCATIONAL EDUCATION PROGRAMS

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CE 024 800

Table of Contents

	Page
Abstract	iii
Chapter I - Summary and Purpose	1
Need	1
Purpose	1
Objectives	2
WWTI Objectives	2
UW-Stout Objectives	3
Rationale	4
The Adult Learner	4
Attrition and Dropout Studies	5
Strategies to Reduce Attrition in Adult Education	7
Informal Assessment Devices	10
Reading	10
Mathematics	15
Summary	15
Chapter II - Design and Methodology	16
Introduction	16
Project Schedule	16
Advisory Committee	16
Design	18
Selection of the Population	19
Data Collection Procedures	21
Dissemination Workshops	23
Chapter III - Results, Conclusions and Recommendations	24
Interview Results	24
Sex	24
Age	24
Length of Time in ABE	26
Reason(s) for Enrolling in ABE	26
Reason(s) for Enrolling in an Occupational Program	28
Type of Occupational Program	28
Did the ABE Program Help with the Occupational Program?	29
Have You Utilized ABE Since Enrolling in an Occupational Program?	29
Major Problems Encountered by ABE Students in Occupational Classes	31
Length of Time in Occupational Program	33
Reason for Not Finishing Occupational Program	33
Feelings About Dropping Out	35
Monitoring of ABE Students in Occupational Programs	35
The Transition Process	36
Evaluation	39
Conclusions	39
Recommendations	42
Bibliography	44

Table of Contents (continued)

Appendix A - Vitas of Project Staff
Appendix B - Advisory Committee Members
Appendix C - Advisory Committee Minutes
Appendix D - Project Summary
Appendix E - Survey Instruments
Appendix F - Open Ended Responses to Survey
Appendix G - Agenda (Dissemination Workshop)
Appendix H - Project Evaluation Open-Ended Comments
Appendix I - The Transition Process
Appendix J - A Sample Process Manual Welding at WWTI

List of Tables

Table III-1 Biographical Information of Students and Non-Completers in Study 25
Table III-2 Reasons for Enrolling in ABE and Occupational Programs by Students and Non-Completers 27
Table III-3 Reactions of Students and Non-Completers of the Relationships of ABE to Occupational Programs 30
Table III-4 Major Problems Encountered by ABE Students in Occupational Classes as Identified by Students, Non-Completers and Teachers 32
Table III-5 Responses of Non-Completers Regarding Their Occupational Program 34
Table III-6 Project Evaluation - ABE Assessment Project Advisory Committee 40
Table III-7 Project Evaluation - ABE Assessment Project 41

List of Figures

Figure 1 Research Design and Schedule 17

Abstract

The purpose of this project was to develop a process that would reduce the attrition rate of ABE students entering occupational programs. To accomplish this goal, ABE students in occupational programs, ABE students who had dropped out of occupational programs and their instructors were interviewed to determine their perceptions of the difficulties faced by ABE students to an occupational program. The results of these interviews show a need to focus on basic skills, study skills, career awareness and personal/social skills. The results of these interviews were used to develop a procedure manual for analyzing an occupational program.

Potential students for that occupational program may then be able to look at the occupation and the program to determine if he/she is interested in it and prepared for the coursework and responsibilities of that occupation.

CHAPTER I

Summary and Purpose

Need

Current societal problems, such as inflation and unemployment, are causing adults to re-evaluate their employability skills. Education is often the route for developing or improving these skills. But the adult often finds it difficult to re-enter the education scene.

Adult Basic Education (ABE) programs are often the adult's first step in returning to school. ABE aims to help adults with deficiencies in basic skills, language and study skills. But specific, occupational skills are not taught. So a student enrolled in ABE must attend an occupational program to develop specific job skills. The transition between these two educational programs is often not smooth. ABE students, as well as "regular" students, are often not prepared for the requirements and expectations of the occupational program. This has been found to be a factor causing attrition in occupational programs.

Purpose

The purpose of this study was to develop a process that will reduce the attrition rate of ABE students entering occupational programs. To accomplish this goal, the project intended to (1) develop a process to identify entry level competencies needed in occupational programs and (2) develop a procedure to assess ABE students' competencies. With this assessment, potential difficulties may be identified, and with additional preparation, the ABE student may be successful in the transition from the ABE program to an occupational program.

Objectives

To accomplish this purpose, this project had planned to:

- identify problems/barriers faced by ABE students entering occupational programs.
- develop a process to identify entry level competencies needed in occupational programs.
- develop a procedure to assess ABE students' competencies. This assessment will identify potential difficulties, so additional preparation can be planned for the ABE student.

This project was jointly conducted by Western Wisconsin Technical Institute and UW-Stout. Each school's specific objectives are outlined below:

The specific objectives for each institution are listed below with a brief narrative of the accomplishment of those objectives. Further detail on the attainment of these objectives is included in the body of his final report.

WWTI Objectives

1. Identify skills needed to enter various occupational programs as they relate to basic skills.

   An analysis was made of the welding and feed and seed program at WWTI. The skills were classified into minimum and guideline competencies which are discussed in Chapter III.

2. Identify basic skills taught in ABE program; relate to skills needed to enter occupational programs.

   The skills needed to enter the occupational program were compared to the basic skills taught in ABE by using a matrix of basic skills. This matrix is included in the manual, "The Welding Program At Western Wisconsin Technical Institute," which is in Appendix J.

3. Develop a procedure to identify deficiencies in basic skills of students in ABE programs.

   The procedure for identifying deficiencies in basic skills has been developed and incorporated into a manual, "Procedures Manual For ABE Transition Project," which is Appendix I.

4. Implement an individual assessment program which will identify skill deficiencies, prescribe remedial action, and place the student in the ABE program in preparation for a specific occupational program.

   A section of the procedures manual (See Appendix I) contains information concerning assessment of skills specific to the occupational program. Also, WWTI is currently considering the development of an assessment center.

UW-Stout Objectives

1. Identify problems encountered by ABE students entering occupational programs.

   The problems of ABE students entering occupational programs were identified through interviewing ABE students in occupational programs, ABE students who had dropped from occupational programs and their instructors. The results of these interviews are discussed in Chapter III.

2. Identify entry level competencies needed to enter occupational programs.

   This analysis of entry level competencies to enter occupational programs was done in conjunction with Keith Valiquette with the welding and feed and seed programs at WWTI.

3. Determine factors that cause ABE students to drop out of occupational programs.

   The ABE students who had dropped from occupational programs were specifically asked the reason(s) for not completing the program. Their responses are included in Chapter III.

4. Determine the gaps between exit skills in the ABE program and entry level requirements of occupational programs.

   The procedures manual, Appendix I, discusses methods of determining the gaps between exit skills in the ABE program and entry level skills of occupational programs.

5. Recommend methods of reducing the gap between exit level ABE and entry level occupational programs.

   Recommendations for reducing these gaps are included in Chapter III.

6. Design a process which can be used to identify entry level competencies for occupational programs.

   The "Procedures Manual for ABE Transition Project", Appendix I, is a compilation of the process to identify entry level competencies.

7. Develop a system to communicate gaps between ABE and occupational programs.

   Suggestions for communicating the gaps between ABE and occupational programs are incorporated in the "Procedures Manual For ABE Transition Project."

8. Disseminate results.

   The results of this study were disseminated to the advisory committee, to vocational-technical school staff (ABE and occupational instructors, counselors and administrators) through three regional workshops. (See Chapter II for detail on the workshops) and via this final report.

Rationale

The Adult Learner

Andragogy, the science of adult instruction, can be helpful in understanding the adult attrition problem. Scores of books and articles have been authored pertaining to the adult as a learner. The traits of the adult learner are summarized here in relation to the adult attrition problem.

Most adults enter an educational experience* with specific goals and objectives in mind. These goals and objectives are most commonly related to the individual's vocational and self-improvement needs and motivate the student to continue or drop from the educational experience. Because the adult has a specific purpose for enrolling in school, the educational experience must be perceived as relevant, practical and worthwhile. The learning must be in the here and now and problems centered. Relating the classwork to present and future responsibilities helps the adult understand its importance. Because the adult has the freedom in deciding to remain in or drop from a class, the adult needs to see relevance to the present and future.

*A term coined by James B. Whipple; it is meant to include any type of educational class, program, seminar, etc.

Adults enter the classroom with a wide repetoire of experience. The experience has many positive effects on the student's education; i.e., the practical applications of the information, the transfer of information learned at home or at work. But it also can be a detriment when it interferes with the receptivity of new ideas. Some adult learners may come to the classroom with the memory of bad educational experiences which could crush their self-confidence even before they start a new educational experience. Because of their experience and background, adults are often independent and self-directed. An educational situation in which the student is dependent or passive will cause resistance and resentment (Newton).

The adult has many commitments. The adult learner must divide his/her time between school, family, job and community activities. Unlike the younger student, whose career may be school, the adult has many demands for his/her time. Again, if school seems irrelevant, if the adult perceives him/herself as a "misfit", or if time or money is insufficient, the adult may feel forced to drop out of school.

Therefore, the educational experience must be perceived by the adult learner as comfortable, but also relevant and worthwhile. These factors are not inclusive but can be very influential in an adult's decision to remain in or drop out of school.

Attrition and Dropout Studies

Attrition is a common problem in adult education. Richard A. Boudreau reported that attrition in many adult programs is over 30 percent in the first two months. Some adult education programs have reported extraordinary attrition rates of 55 percent (Sainty, 1971), 52 and 61 percent (Brightman, 1974).

Dropping out need not always be considered negatively. Dropping out or transferring may be the right choice if the individuals have met their personal and/or academic needs. Dropouts are a problem when the cause is academic failure or an inappropriate learning environment.

In an attempt to identify causes for attrition, studies have examined the characteristics of the "typical" dropout. These data, it is presumed, would sensitize the teacher, counselor, and administrator to the dropout prone so more help can be given to individuals displaying these characteristics.

Age, marital status, dependents, occupation and previous adult education participation have been found to be factors in persistence and non-persistence of adult learners. More specifically, dropouts from adult education programs were more often young and single, where persisters were often older, married, housewives, and had children (Dickinson and Verner, 1967).

A comparison of students' self perceptions to their persistence in programs found that on the Adjective Check List, persisters had higher scores in the areas of self control, endurance, and deference. Dropouts, on the other hand, scored higher in the number of unfavorable adjectives checked, autonomy, change and succorance (Wilson, 1977).

Attrition is often related to the individual's self concept. He found that dropouts perceive themselves as unprepared or unready for their educational experience. These students often face uncertainty about themselves, their values, and their goals (Reimanis, 1973).

Determining the factors that predict the dropout prone is much more difficult. Thorndike (1932) stated that age is an irrelevant factor in predicting success or potential of an adult. More significant are the factors of highest grade reached, the amount of time to reach that grade,

and a valid intelligence test. He cautioned, though, that capacity, interest, energy and time were required for these factors to be significant.

Pedrini and Pedrini (1975) found that ACT composite scores and cumulative gradepoint average (among other factors) related to persistence. They found that gradepoint average was a primary indicator. But, Reimanis (1973) felt that college aptitude tests are not effective predictors. The student's self concept and value clarification are more critical, in his opinion.

G.E. Sainty (1971) identified factors that differentiated the dropout from the completer in adult retraining programs. These characteristics, which are predictors of the "non-success syndrome", fall into three major categories: academic, social and occupational status. Academically, the dropout prone have lower intelligence, lower reading ability (measured by speed, accuracy, vocabulary and comprehension), completed fewer grades in school and repeated more grades in school. The dropout prone are more likely to be in a lower social class (measured by Hollingshead scale), and is downwardly mobile. Occupationally, the dropout is in a lower occupational class (measured by Blishen scale), has changed jobs more frequently and has a lower rate of pay than his/her counterpart.

So although it is almost impossible to define the dropout prone, research has shown some common characteristics. Many dropouts have a history of low academic achievement, and the lack of success in school perpetuates. Because their goals and objectives are not well defined, the dropout-prone generally choose the easiest answer to the problem - to drop out. Related to this, preparation for the educational experience, especially psychological or emotional preparation, is very important.

Strategies to Reduce Attrition in Adult Education

Strategies need to be developed to reduce the dropout rate. Many studies have identified the problem, but not nearly as many identify

solutions or prevention.

Counseling programs that follow the student from admission to job placement would substantially reduce student attrition. A special counseling program set up at Drake University (Iowa) was effective in reducing the attrition of potential dropouts. The advisor saw each student during the first week of school and once every two weeks thereafter. The constant contact with the students gave the counselors a chance to work with student problems immediately before the problems had a chance to snowball (Shulman , 1976).

A program developed at Corning Community College of New York attempted to reduce the anxiety and uncertainty of students enrolling in the school. The programs were developed to help the students become more familiar with faculty and administration, as well as to help the students know themselves. The program included weekly rap sessions, achievement motivation training*, group counseling, encounter groups, early orientation and faculty programs to develop student-centered classrooms. These personal counseling programs were effective in improving the freshman student performance and reducing the attrition rate. The author, Gunars Reimanis, emphasized that school is more than academic and when this is realized, attrition will be abated (Reimanis, 1973).

Because many students enroll in ABE programs for job related reasons, counseling should concern the student's vocational interests and needs, but counseling personal problems is also important. Health, jobs, housing and family life are problems that dramatically affect attrition. Typically, though, the student does not talk with a counselor about these problems, probably because the student usually sees the counselor once or twice a

*The achievement motivation training was used to develop self-exploration skills to help students adjust to college life.

year. For this reason, teachers could be the most effective counselors of personal and vocational problems (Mezirow, Darkenwald and Knox , 1975).

Gunars Reimanis (1973) who had identified value clarification and goal setting as problems affecting the dropout-prone, recommended an emphasis on personal counseling, through rap sessions, encounter groups and achievement motivation training. These techniques helped the students become more aware of themselves, their needs and potentials.

Students also need help in developing a series of reachable short term objectives. Often students enroll in programs without plans, or see no future in continuing in a seemingly fruitless venture. By setting objectives, the student will be able to see accomplishment as he/she reaches each objective, and then, hopefully, will become more encouraged to continue (Mezirow, Darkenwald, and Knox , 1975).

Hawkins (1968) feels that counseling services should be expanded to help each student. Specifically, students should be counseled in setting meaningful goals in their proper perspective, as well as helped to overcome social and psychological barriers that could affect the student's learning potential. Counselors, teachers and administrators should work together in forming an educational environment that would be personally satisfying to the adult learner.

Another aid to success is the screening and placement of students into appropriate classes. This could be accomplished through interviews and assessment. An assessment using either simple diagnostic tests or graded course materials used as performance tests has been recommended by Mezirow, Darkenwald and Knox (1975).

In summary, counseling appears to be an important deterent to attrition. Counseling services* need to help the adult learner feel more comfortable with him/herself and his/her role in the educational experience. Familiarity

with the school, program and the occupation is an important step in developing this confidence. This project has worked with a process of analyzing course materials and assessing the student's readiness to use those materials.

Informal Assessment Devices

Informal assessment devices are recommended to identify strengths and weaknesses of students, to identify possible educational difficulties and to help the teacher develop curriculum into a logical sequence (Smith). The value of this type of assessment is directly dependent on the relevance of the assessment device to the curriculum because the informal assessments use the course materials to formulate the questions. This is in contrast to standardized tests which include a variety of questions, but not all the questions are related or relevant to the coursework of a specific classroom. When using informal assessment devices, their reliability increases when more than one method is used (Smith, 1969) (Anderson, 1975).

The following section includes common informal assessment devices. These devices can be used to assess a student's ability and from this assessment, remedial work can be planned to help correct a student's weaknesses so he/she can be better prepared and more familiar with future coursework.

Reading

Reading skills can be assessed with a variety of methods. Each method, however, measures a specific aspect of reading and therefore its interpretation is limited. For this reason, more than one measure should be used to give a more valid indication of reading skills.

*In this context, counseling services refers to all people who guide a student during their educational experience.

Readability is a term commonly used in matching books to students (or vice versa). John Gilliland, in his book, Readability, emphasizes that readability is based on three aspects of the reading process: comprehension, fluency and interest. Comprehension is the single most important factor; it is the meaning the reader gives to the words. The reader's background is critical since his/her experiences may give meaning, distort the meaning, or may be completely unrelated to the reading material. Fluency is the speed and efficiency of reading a particular book. Factors that affect speed are the reader's perceptual abilities, the book's legibility, size and print. Lastly, interested is related to the motivation to read the specific book. Readability is the interaction of the reader with the book. Therefore, an assessment of reading skills must not concern the student's ability alone, nor the difficulty of the book alone, but each should be considered separately and in combination.

Determining the readability of a book can be accomplished by quantitative or qualitative measures. Quantitatively, selected passages can be analyzed for their word and sentence length, assuming that length indicates difficulty. Several formulas rely on this measure. Gunning's "Fog Index" is based on determining average sentence length, and the percentage of words with three or more syllables in several 100 samples. This index gives the grade level required for understanding the book. McLaughlin's SMOG grading is based on three 10 sentence samples. Again, every word of 3 or more syllables is counted, then the square root is calculated and 3 is added. This score indicates the grade the reader must reach to fully understand the book. The Fry formula is another example of readability based on word and sentence length. Of three 100 word samples, the average sentence length and average word length is plotted on a graph which indicates the grade level of the book.

The Dale-Chall formula is based on a similar permise as the formulas just mentioned, but its method is different. Of 100 word samples, the average sentence length is computed and the words are compared to the Dale list of 3000 words. This list is a compilation of the most frequently used words. The Dale-Chall formula has been widely accepted because of its consistency and high validity. One drawback has been that it is very time consuming unless one is experienced working with it.

Readability formulas have downfalls. This is a brief summary of their criticisms.

The formula results are inconsistent; each formula has a different system of measurement which has the potential of yielding a different grade level for the same reading material. For example, Gilliland applied the Dale-Chall, the Fog Index, and the SMOG to two books. The results showed the Dale-Chall gave a range of two grade levels, the Fog indicated the higher grade level of the range, and the SMOG resulted in the lower of the grade levels. This is because each formula relays different results; the SMOG assesses the value of the book at an independent level; the results of the Fog are in terms of instructional level, or basic understanding. Standardization of the interpretation of results has not yet been achieved.

Related to the standardization of formula results is the issue of standards for the grade level and how the criteria are set. How are the norms for each of the grade levels set for each formula? Do the standards need to be changed over a period of years or do they remain universal? Standardization is a difficult, if not impossible task.

Most formulas are based on word and sentence length. Not always are the short words the most easy to read. Often, vocabulary that are technical

to an occupational field have three or more syllables but are used so frequently that they are not considered difficult. For example, in the medical field, medicine, practitioner, assistant, instrument. A homogeneous group of medical students would probably have fewer problems with more difficult (more than three-syllable) words.

Sentence length is not always an indication of difficulty either. On the average, long sentences are more complex and require more use of memory and language skills. But again, the structure of the sentence is just as important.

In an attempt to look at readability quantitatively, several other measures have been devised. These measures are more concerned about the style of the book, i.e., the number of simple, compound and complex sentences, the number of prepositional phrases, modifiers, etc. (Haugh, 1975)

The cloze procedure is a method of assessing a student's comprehension of the specific reading material. With this method, a passage is selected from the book and words are omitted. A judgment of the student's comprehension is based on the number of omissions correctly replaced. This method is based on the Gestalt clozure principle, which describes a person's tendency to fill in an incomplete thought.

The cloze procedure assesses the student's understanding of the thoughts presented by the author. To do this, the student must have some understanding of language and the technical field. The student reacts to language and context clues to answer correctly. Also, the student's interest and background play an important role in understanding the context, and thus, answering correctly (Haugh, 1975).

The cloze procedure has been lauded for its ability to determine readability diagnoses of student responses for possible remediation and as a measure of comprehension (Haugh, 1975), (Myers, 1976), (Gilliland, 1972).

Besides its validity and effectiveness, the cloze procedure has the advantages of low cost, ease of administration, scoring, and interpretation and direct use of the reading material by the student.

Another method of assessing a student's comprehension of a specific reading material is through an individual reading inventory (IRI). An IRI is a 250-350 word passage with corresponding questions, ranging from narrow, specific questions to broad, thought-provoking questions. This type of assessment closely relates to many classroom assignments and, if well constructed, can give the instructor an idea of the level on which the student operates. But a major drawback of this measure is if the student is reacting to the complexity of the question or the complexity of the passage (Gilliland, 1972). Also, the results must be interpreted carefully.

One of the most important factors in comprehension has only been implied in these measures. Vocabulary is the single most important factor of reading comprehension. An assessment of vocabulary skills can be incorporated in the individual reading inventory, is an important part of the cloze procedure, and recognition type exercises can be developed to test a student's awareness of vocabulary terms (West, 1975).

Assessing the student's ability to handle roots, prefixes and suffixes is another way of measuring the student's word-attack skills.

Analyzing a book for the three basic types of words also can be helpful. The types of words are general (words that are used in everyday language), technical (words that are only found in a specific field), and special (words that are used in everyday language but have a different meaning in the technical field). An analysis of the types of words in a passage gives an indication of the technical jargon and the concept load of that particular passage.

Mathematics

In many ways reading is closely related to mathematics. Comprehension, fluency and interest are critical factors in determining if a math book is appropriate for a particular student. Therefore, many of the reading devices can readily be applied to mathematics.

Summary

The assessment measures discussed have been informal. Informal, teacher-made assessments are more directly related to the classroom and therefore, more effective. If standardized tests directly fit in with course content and materials, they may be used, but too many times standardized tests are too broad.

No single measure is recommended on its own merit. A variety of measures would be more helpful to the instructor and the student to assess the student's skills, background and interest (Herber, 1970).

Chapter II

Design and Methodology

Introduction

This project was funded as a joint project between UW-Stout and Western Wisconsin Technical Institute (WWTI). The project staff from UW-Stout looked at the transition from ABE to occupational programs on a state-wide basis; the project staff from WWTI focused more deeply on their programs. This approach gave the project a wider scope.

Project Schedule

The schedule for this project is illustrated in Figure 1 on the following page.

Advisory Committee

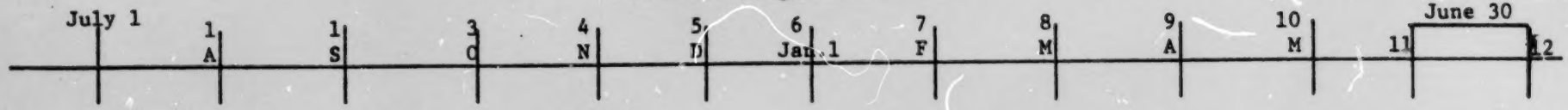
An advisory committee was formed to provide input on the research strategy, objectives and activities. The committee consisted of representatives from the WBVTAE (ABE consultants), ABE administrators and coordinators, occupational instructors and ABE students. (See Appendix B for the names of the advisory committee members.)

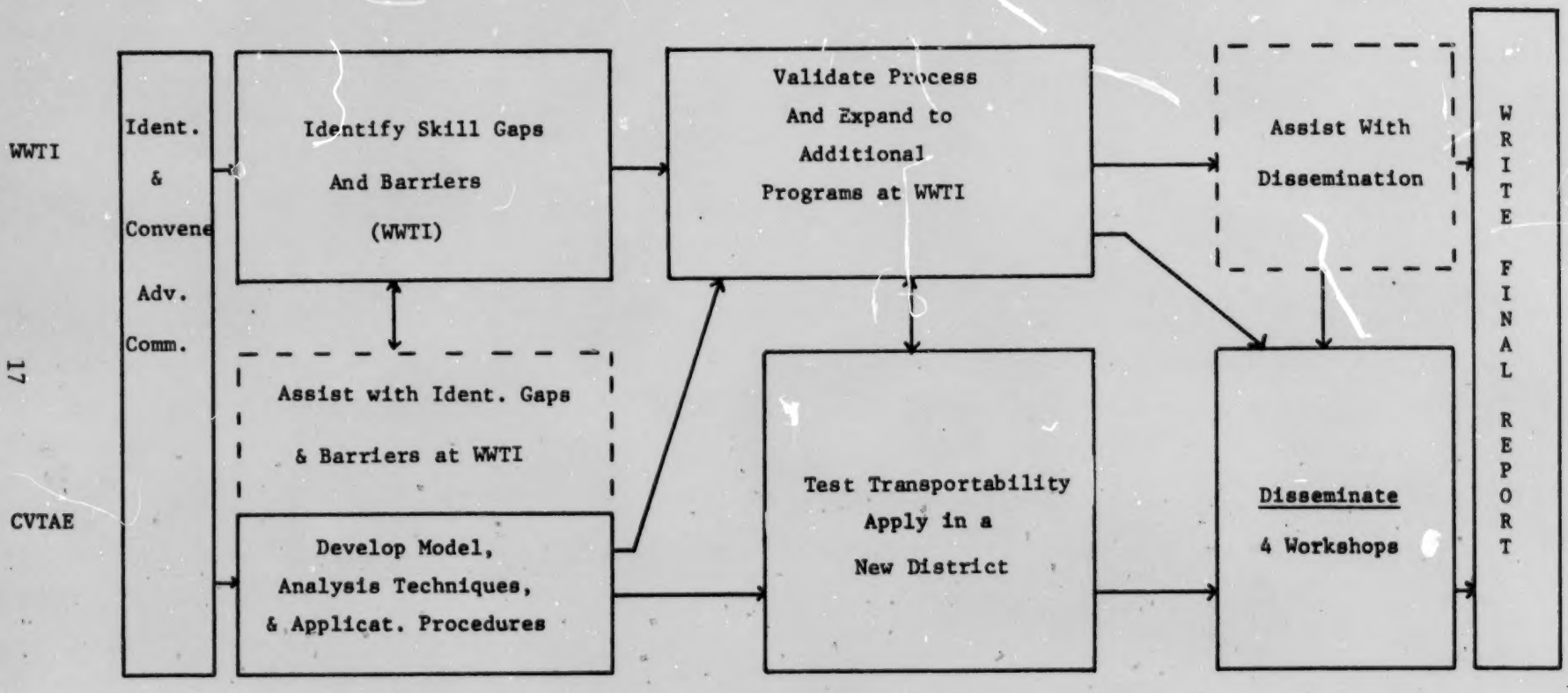
The first advisory committee meeting included a discussion of the project, its objectives and activities. The committee then brainstormed possible problems and barriers faced by ABE students in the transition into occupational programs.

The second advisory committee meeting was held in December. During this meeting the interview results and their implications were discussed. Based on the results, the committee made suggestions for reducing the attrition rate of ABE students in occupational programs.

Figure 1

Research Design and Schedule




WWTI
CVTAE
Ident. & Convene Adv. Comm.
Identify Skill Gaps And Barriers (WWTI)
Assist with Ident. Gaps & Barriers at WWTI
Develop Model, Analysis Techniques, & Applicat. Procedures
Validate Process And Expand to Additional Programs at WWTI
Test Transportability Apply in a New District
Assist With Dissemination
Disseminate 4 Workshops
WRITE FINAL REPORT

The survey results and the transition process were reviewed at the last advisory committee meeting. Also discussed was the dissemination workshop agenda and schedule.

Minutes of each of the advisory committee meetings are included in Appendix C. The meetings were very productive and helpful in giving directions to the project.

Design

The first phase of the project involved identifying the barriers ABE students faced upon entering occupational programs. Feedback was needed from students who were successful in the transition from ABE to occupational programs, from students unsuccessful in making the transition and their teachers. Therefore, three different, but corresponding, survey instruments were developed.

The items for the survey instrument were developed and synthesized from a review of the literature, the objectives of the project and the ideas of the staff members. The survey was designed to meet two of the project objectives: (1) determine the problems that ABE students have when they enter a one- or two-year vocational education program; and (2) determine the factors that cause ABE students to drop out of a vocational diploma program.

Personal data that could be related to potential transition problems were gathered. Because names and addresses of students were not needed after the initial contact, this information was not included, which helped maintain the confidentiality of the interview. Age, sex and occupational program were recorded. A judgment was made by the interviewer regarding the "traditionalness" of the program the student had enrolled in. Because a man or woman in a non-traditional field may encounter unique problems, it was felt that this factor could be pertinent to the study.

Other biographic data collected were the student's purpose(s) for enrolling in ABE, length of time spent in ABE, and the purpose(s) for enrolling in an occupational program. This information was used to determine the student's goals and length of time needed to accomplish these goals.

A checklist of potential problems was developed and included in the survey instrument. The general areas of academic problems, career awareness and personal problems were reclassified into more specific problems.

Questions regarding the value of ABE and suggestions for improving the ABE and/or occupational program(s) were also included in the survey instrument.

The survey instruments were piloted and revised before they were used to collect data. Copies of these instruments are included in Appendix E. Form 1 (blue) was used with former ABE students who successfully made the transition into vocational programs. This included persons who had graduated from programs, or were in the program at the time of the interview. Form 2 (yellow) was developed for ABE students who had dropped out of occupational programs. Form 3 (pink) was used for teachers and coordinators.

Selection of the Population

Because the study attempts to identify problems encountered during the transition between ABE and vocational programs, ABE students were contacted during the first three months of their vocational education experience.

The interviews were divided between Keith Valiquette, ABE staff - WWTI, and Joy Bergstrand, UW-Stout. Keith Valiquette contacted and interviewed an indepth sample of ABE students in occupational programs from WWTI; Joy Bergstrand attempted to interview a cross-section of students from various VTAE schools in Wisconsin.

In an attempt to identify problems that could affect the attrition rate, ABE students who had dropped from occupational programs were also interviewed. This population was difficult to reach. Contacting students no longer affiliated with the school was even more difficult than contacting students in occupational programs. Many times these students had jobs or family commitments, or because they felt discouraged, due to their failure in school, were unwilling to talk about their problems encountered during the transition from ABE to an occupational program.

At WWTI the names of one hundred possible respondents enrolled in the ABE program through Western Wisconsin Technical Institute between September of 1973 and June of 1977 were randomly chosen from ABE records. This group was divided into four subgroups with approximately twenty-five students per group. The four subgroups were composed of the following: (1) students who graduated from vocational programs; (2) students who were presently in the middle of programs; (3) students who had just begun programs and had completed several months; and (4) the fourth group was comprised of former ABE students who had failed to complete vocational programs.

Once current addresses were established for the students all were sent letters briefly describing the project and its goals. They were also encouraged to meet with the researcher when convenient in order to conduct an interview. Seventy students responded to the letter and all were interviewed over a three-month period. The seventy students included twenty-one non-completers, and forty-nine students who were successful in their transition to a vocational program.

A final eighteen interviews were conducted with the instructors of twenty former ABE students who withdrew or failed to register for Quarter II, 1977. These students were among a group of sixty former ABE students who were

enrolled in vocational programs at Western Wisconsin Technical Institute Quarter I, 1977.

For schools other than WWTI, ABE coordinators and instructors contacted students. The ABE coordinator was asked to schedule interviews, and to explain to the students the purpose of the study and the importance of their input. These interviews were limited by the fact that the ABE coordinator may not have known who had gone on to occupational programs or could not reach the student. Also, the student may have been unwilling or unable to come for the interview.

Teachers and coordinators were also interviewed. ABE teachers often knew what their students weaknesses would be in their program, based on the student's performance in ABE. The occupational teachers were also contacted. In some cases, these teachers were unaware of the former ABE students, and felt unwilling to generalize about them. But others, particularly those in close communication with the ABE program, were able to identify problems that were evident in their classes.

Data Collection Procedures

To identify the problems encountered by students during the transition from ABE to occupational programs, the informal interview technique was used. Because students may be unwilling to talk about their problems and difficulties, the informal interview gave more opportunity to adapt the interview to the interviewee. A basic checklist of questions (See Appendix E) was followed; they were reworded or restructured when necessary for each interview.

Procedures were reviewed before conducting the interviews. These interview techniques were discussed.

Introduction: Establishing rapport with the interviewee.

- Greet the student by name.
- Introduce yourself and your purpose.
- "Break the ice" by asking about the program the student is enrolled in.
- Try to maintain eye contact with the student and show interest in what he/she is saying.

Interview: Eliciting information from the interviewee.

- Form 1 is to be used for ABE students enrolled in vocational programs; Form 2 for dropouts from vocational programs.
- Depending on the flow of the conversation, questions may be asked randomly, not necessarily in the order listed.
- When necessary, questions should be reworded.
- Ask the student to describe or explain the problems and difficulties they have had.
- Questions 3 and 4, which deal with the sex and age of the student, do not need to be asked; a good guess is sufficient.
- Listen carefully to the interviewee's answers; attend to non-verbal cues.

The interviews were generally on a one-to-one basis in a place apart from the actual classroom. (Most interviews were conducted in student lounges, dining areas and empty rooms.) The interview was made as non-threatening as possible. Each interviewee was told of the purpose of the interview and the way in which the results would be used. The interview then proceeded as conversationally as possible.

The data from these interviews were processed at the Center for Research and Educational Improvement (CREI). The results of this data collection will be discussed in Chapter 3.

Dissemination Workshops

With the help of the advisory committee, three dissemination workshops were scheduled. The sites were chosen for most easy access to a majority of participants. The sites and dates of the workshops were: May 3 at the Hoffman House in Wausau, May 11 at the Holiday Inn at Waukesha and May 12 at the Sheraton Inn in Madison.

The advisory committee felt that ABE and occupational staff should be involved in the workshops, as well as counselors or curriculum coordinators. Therefore, districts were requested to send teams consisting of ABE, occupational, curriculum and counseling staff to the workshops.

The agenda of the dissemination workshops is included in Appendix E. The topics of the workshop will be discussed in Chapter III. Participant evaluation of these workshops is included in Chapter III.

Chapter III

Results, Conclusions and Recommendations

Interview Results

The results of the interview will be discussed item by item. In this chapter, the term "non-completer" refers to a former ABE student who enrolled in an occupational program but did not complete it. The first section is a summary of biographic information describing the interviewed students and non-completers. It should be noted that this population was not intended to be representative of the entire ABE population nor of students in occupational programs. This biographic information is reported to provide a basis for understanding the student and non-completer responses. This section refers to Table III-1.

Sex

Interviews were conducted in ten schools with 104 persisting students and 22 non-completers. The persisting students were nearly equally divided: 58% were male, 42% female. The majority of non-completers who participated in this study were male, 82%; only 18% of the non-completers were female.

Age

The ages of the students and the non-completers correspond fairly closely in almost every age category. Eight percent of the student and 5% of the non-completers were in the age group of nineteen and under. Fifty percent of the students and 45 percent of the non-completers were between the ages of 20 and 29. Seventeen percent of the students and

Table III-1

Biographical Information of Students*
and Non-Completers** in Study

	Students* (N=104)		Non-Completers** (N=22)	
	N	%	N	%
Sex:				
Male	60	58	18	82
Female	44	42	4	18
Age:				
19 and under	8	8	1	5
20-29	52	50	10	45
30-39	18	17	4	18
40-49	14	13	6	27
50-59	8	8	1	5
over 60	3	3		
Length of Time Enrolled in ABE:				
up to 1 month	4	4	1	5
1-3 months	35	34	4	18
3-6 months	25	24	9	41
1 year	18	17	4	18
1-2 years	9	9	2	9
More than 2 years	3	3	2	9

*Students include former ABE students enrolled in and attending occupational programs at the time of the interview.

**Non-completers are former ABE students who had enrolled in an occupational program but discontinued the program before its completion.

18 percent of the non-completers were between the ages of 30 and 39. In the age category of 40 to 49, there were twice as many non-completers, 13 percent of the students and 27 percent of the non-completers were in this category.

Length of Time in ABE

Again, there were significant differences between students and non-completers. A small number of both students and non-completers were in ABE for less than one month (4% and 5% respectively).

Nearly twice as many students (34%) than non-completers (18%) were in ABE from 1 to 3 months. Twenty four percent of the students had enrolled in ABE for 3 to 6 months. It appears that non-completers may remain in ABE for a little longer than persisting students.

Table III-2 summarizes the reasons for enrolling in ABE and occupational programs. The responses listed are summaries of the students' and non-completers' comments. The interviews did not try to suggest possible answers. Therefore, the responses are dependent on the students' and non-completers' recollection and/or desire to respond.

Reason(s) for Enrolling in ABE

The interviewees were asked why they had enrolled in ABE; because their responses often covered more than one area, the totals add up to more than 100 percent. The number of students and non-completers enrolling in ABE for their high school equivalency were fairly equal. Sixty-one percent of the students and 64 percent of the non-completers gave the GED as a reason for enrolling in ABE. Interestingly, 73 percent of the non-completers also wanted to improve their study skills; but only half as many students.

Table III-2

Reasons for Enrolling in ABE and Occupational Programs by Students* and Non-Completers**

	Students* (N=104)		Non-Completers** (N=22)	
	N	%	N	%
Reason(s) for Enrolling in ABE:				
high school equivalency	63	61	14	64
improve study skills	48	46	16	73
learn/improve English	30	29	6	27
encouragement from family	4	4	1	5
Reason(s) for Enrolling in Occupational Program:				
to get a job	77	74	19	86
to learn new skills	57	55	19	86
to meet employer requirements	3	3	1	5
CETA or other assistance program	24	23	6	27
recommendation from Job Service counselor	14	13	2	9
recommendation from ABE instructor	6	6	2	9
recommendation of other students	2	2	0	0
reputation of the school/program	3	3	0	0
Type of Occupational Program Enrolled In:				
traditional occupation	84	81	19	86
non-traditional occupation	6	6	2	9

*Students include former ABE students enrolled in and attending occupational programs at the time of the interview.

**Non-completers are former ABE students who had enrolled in an occupational program but discontinued the program before its completion.

Forty-six percent had the same motivation. To learn or improve English was a goal of 29 percent of the students and 27 percent of the non-completers. Four percent of the students and 5 percent of the non-completers were encouraged by their family to attend ABE classes.

Reason(s) for Enrolling in an Occupational Program

Again the interviewees were asked for all the reasons for enrolling in an occupational program. Therefore, the responses will total more than one hundred percent.

The most frequent reason for enrolling in an occupational program was to get a job. Eighty-six percent of the non-completers and 74 percent of the students were motivated to enroll in a program for this reason. To learn new skills was reported second most often. Non-completers appeared to be much more interested in developing new skills; their response was 86 percent, students 55 percent. CETA and other assistance programs also contributed as reasons for enrolling in occupational programs. Twenty-three percent of the students and twenty-seven percent of the non-completers reflected this as a reason. Recommendations by other people were also cited as reasons, but not nearly as often. The recommendation of a Job Service counselor was a reason for 13 percent of the students and 9 percent of the non-completers. Fulfilling employer requirements was cited by 3 percent of the students and 5 percent of the non-completers. Recommendation of other students and the reputation of the school were cited by students only; (2 percent and 3 percent respectively).

Type of Occupational Program

The students and non-completers asked what occupational program they had enrolled in. From this response the interviewer decided if that

occupation was traditional or non-traditional in relation to the individual's sex. Examples of non-traditional occupational choices were women in auto mechanics and welding. The men in this study had generally chosen traditionally male occupations. Only 6 students and 2 non-completers chose occupations that were somewhat non-traditional.

Table III-3 summarizes the reactions of students and non-completers to their ABE program.

Did the ABE Program Help with the Occupational Program?

When asked if ABE helped with the interviewee with his/her occupational program, surprisingly, more non-completers responded favorably. Ninety-one percent of the non-completers and 70 percent of the students felt it did help. Five percent of the non-completers and one percent of the students felt it had helped somewhat. One percent of the students thought that it did not help. Twenty eight percent of the students and four percent of the non-completers said they could not make a judgment.

Have You Utilized ABE Since Enrolling in an Occupational Program?

Sixty-eight percent of the non-completers had returned to use ABE while they were enrolled in an occupational program, only 38 percent of the students returned. Thirty two percent of the non-completers and 30 percent of the students said they had not returned. Most of the remaining 32 percent of the students were working on their GED and their occupational program at the same time or working part time in both programs.

A summary of student comments regarding the effectiveness of ABE is included in Appendix F. In general, the students were very satisfied with ABE, but expressed a desire for more - more books, more teachers and more time.

Table III-3

Reactions of Students* and Non-Completers**
of the Relationship of ABE to Occupational Programs

	Students* (N=104)		Non-Completers (N=22)	
	N	%	N	%
ABE was helpful with my occupational program:				
Yes	73	70	20	91
Somewhat	1	1	1	5
No	1	1		
I have used ABE since I enrolled in an occupational program:				
Yes	39	38	14	64
No	31	30	7	32

*Students include former ABE students enrolled in and attending occupational programs at the time of the interview.

**Non-completers are former ABE students who had enrolled in an occupational program but discontinued the program before its completion.

Table III-4 is a summary by respondent (students, non-completers and teachers) of the major problems faced by ABE students enrolled.

Major Problems Encountered by ABE Students in Occupational Classes

Basic skills were among the chief concerns of the persisters in occupational programs. Math was a problem encountered by 31 percent of the persisting students; writing/speaking by 28 percent; and reading by 27 percent. The pace of the class and knowledge of the field were identified as problems by 30 percent of the students.

The non-completers, on the whole, identified more problems than the persisting students. Half of the non-completers named problems and/or difficulties in the areas of knowledge of the field, family/personal problems, occupational terminology and pace of classes. Forty-one percent of the non-completers indicated problems in math or had problems that would indicate their personality was not compatible with their chosen field. Career knowledge, as evidenced by the number of responses to adequate knowledge of field and personality, appears to be a critical factor. Teachers ranked personal skills as a common problem or difficulty faced by students in the transition from ABE to occupational programs. Family/personal problems was cited as a major problem of students by 59 percent of the teachers; realistic goals by 53 percent; ability to adjust by 47 percent. The basic skill areas of writing/speaking and reading were ranked high by the teachers, with responses of 47 percent and 44 percent respectively. Forty-seven percent of the teachers felt students had problems coping with the pace of classes.

Totaling the persisting student, non-completer and teacher responses, the problems fall into four main categories - basic skills, study skills,

Table III-4

Major Problems Encountered by ABE Students in Occupational Classes As Identified by Students*, Non-Completers**, and Teachers

Students (N=104)			Non-Completers (N=22)			Teachers (N=32)			Total Responses (N=158)		
	N	%		N	%		N	%		N	%
Math	32	31	Adequate knowledge of field	13	59	Family/personal	19	59	Pace of classes	70	44
Pace of class	31	30	Family/personal	11	50	Realistic goals	17	53	Family/personal	63	40
Adequate knowledge of field	31	30	Terminology	11	50	Writing/speaking	15	47	Math	60	38
Writing/speaking	28	28	Pace of classes	11	50	Pace of classes	15	47	Adequate knowlege of field	59	37
Reading	27	27	Math	9	41	Ability to adjust	15	47	Writing/speaking	47	30
			Personality compatible with field	9	41	Reading	14	44	Realistic goals	47	30
									Ability to adjust	46	29
									Financial	46	29
									Reading	44	28
									Study Skills	44	28
									Terminology	43	27

career awareness and personal/social skills. Many specific problems encompass more than one general area. The most frequent response for the total group was pace of classes (44 percent). Personal problems were reflected in the responses family/personal, 40 percent, realistic goals, 30 percent, and ability to adjust, 29 percent. Basic skills were noted in the responses to math, 38 percent, writing/speaking, 30 percent, and reading, 28 percent. Career awareness was reflected in knowledge of the field, 37 percent, as well as realistic goals, 30 percent. Study skills was reflected not only in the responses to basic skills, but also in the responses to study skills, 28 percent, and terminology, 27 percent.

The data listed below refer to Table III-5 questions which were specifically asked of non-completers.

Length of Time in Occupational Program

The non-completers spent varying amounts of time in occupational programs before dropping out. But by the first semester, 50 percent of the non-completers we contacted had dropped out of the program. Nine percent of the non-completers indicated they had been in the program for less than one month. Several of these interviewees noted they had started several times; each time giving up in the first three to four weeks. Seventy-seven percent completed one to three months, 23 percent completed three to six months, and 32 percent spent nearly a year in the program before dropping out. Five percent indicated they had dropped during the second year of an associate degree program.

Reason for Not Finishing Occupational Program

Of the non-completers interviewed, no one mentioned transferring to another school or quitting school to find a job. Only 23 percent dropped

Table III-5

Responses of Non-Completers** Regarding Their Occupational Program

	Non-Completers** (N=22)	
	N	%
Length of time in occupational program:		
Up to one month	2	9
1-3 months	6	27
3-6 months	5	23
1 year	7	32
1-2 years	1	5
Reason(s) for not finishing occupational program:		
Financial	5	23
Found a job	0	0
Went to a different school	0	0
Academic reason	9	41
Career development reason	10	45
Personality reason	12	55
Miscellaneous reason	12	55
Other		
Feelings about not completing occupational program:		
Satisfied	4	18
Unsure	7	32
Dissatisfied	10	45

**Non-completers are former ABE students who had enrolled in an occupational program but discontinued the program before its completion.

because of a financial problem. More critical was academic, career awareness, personality and miscellaneous reasons. The miscellaneous category included registration, counseling, time, job schedule and personal and family problems. Fifty-five percent of the non-completers felt one or more of those items affected their dropping out of an occupational program. Fifty-five percent also felt personality was a factor. Within the category of personality were the items human relations skills, personality compatible with field of study (persons, data, things, orientation, etc.), values, motivation, maturity and ability to adjust. Forty-five percent of the non-completers had a problem with their career development skills, which included knowledge of the field, ability and interest appropriate to their field and realistic goals. Academic also ranked high, with a response rate of 41 percent. These included factors in general education and occupational classes, basic skills, vocabulary and classroom structure.

Feelings About Dropping Out

Forty-five percent of the non-completers were dissatisfied that they had dropped out. Thirty-two percent were unsure and 18 percent were satisfied.

Monitoring of ABE Students in Occupational Programs

Throughout the project year, Keith Valiquette monitored the progress of ABE students in occupational programs at Western Wisconsin Technical Institute (WWTI). At the start of Quarter I, 1977, 60 former ABE students were enrolled in occupational programs at WWTI. Each quarter a progress check was made on each student with his or her respective instructor(s). This followup found that the greatest attrition was experienced during and at

the completion of Quarter I. Only 40 of the 60 students returned second quarter; 20 withdrew from school. Second quarter only 5 students withdrew; and at the end of three quarters another 5 students withdrew. Overall, an attrition rate of almost 50 percent was evident from the commencement of Quarter I to the end of Quarter III.

Again, program choice, academic difficulties, family and personal problems were the major factors contributing to this attrition rate.

The Transition Process

The data gathered from the interviews provided a framework for developing a process of analyzing specific occupational courses to determine the skills needed to enter and succeed in the program. Specifically, the areas of academic skills, study skills and career development skills were analyzed since they were frequently cited as problem areas.

The transition process (See Appendix I) was developed after reviewing literature and applying the competency analysis process to occupational programs. Briefly the process involves collecting the instructional materials actually used in the program. Then, the occupation(s) related to the program was analyzed with a task analysis process to determine the types of tasks performed on the job and learned in the program. These tasks were then analyzed for the knowledges, skills and attitudes needed to perform them and critical concepts were identified. This information was synthesized into a form that would communicate the critical knowledges, skills and attitudes needed for success in the program. Then, informal assessment devices were developed.

This process was used at WWTI in their welding and feed and seed programs. The following is a summary of the procedure Keith Valiquette used in developing the process manual at WWTI.

The initial phase of the process to identify entry level competencies began with a meeting of interested program faculty from welding and agriculture. The rationale for the project was explained and the activities planned were described.

During the following weeks a sampling of materials from Welding and Feed, Seed, and Farm Supply was collected. This included handouts, textbooks, laboratory manuals, tests, assignment sheets, course outlines and descriptions. Classes were also visited in order to observe the classroom setting and style of instruction utilized, e.g., lecture, individualized, small group, shop, laboratory, or field situation.

Next, the materials and activities were examined for the purpose of identifying the critical tasks associated with each program or occupation. Reading levels were established for course materials. Computational and communication skills were identified as well as special requirements peculiar to a program or occupation, e.g., depth perception in welding.

Once the critical tasks were identified for the two programs it was then necessary to determine the basic skills, knowledges, attitudes, and physical requirements necessary to perform those tasks. The identification of entry level competencies provided a basis for which guideline competencies could be readily developed. With this accomplished the information and materials collected were incorporated into a manual suitable for the use of ABE instructors and students.

The identification of entry level competencies should significantly improve the counseling and instructional process because ABE students will be counseled and prepared for programs appropriately suited to their individual needs and abilities. A copy of the welding manual is included in Appendix J.

From the pilot test of the process on these two programs, essential skills for success were distinguished from skills nice to have. To differentiate the two levels of requirements, two terms were coined; minimal competencies and guideline competencies. Minimal competencies are those competencies absolutely necessary in order to participate in an occupational training program; guideline competencies are those competencies which would greatly enhance the chances for successful completion of an occupational training program.

This process was also pilot tested at Wisconsin Indianhead Technical Institute (WITI). Team members, John Swenson, Susan Cage and Norman Jensen, followed the process to develop a manual for the welding program at WITI.

Because this process has just been developed, the pilot process manuals have not been validated. This process will be validated when it is used to help ABE students interested in the program.

The reactions of the advisory committee and participants of the dissemination workshops were very favorable to this process. Several people have indicated an interest in continuing or expanding this process within their own school.

Several points should be considered before implementing this process.

- A team approach is important for effective use of time and effort, and also to improve the lines of communication between ABE and occupational programs. When using a team approach, an effective leader to coordinate the process.
- Start with staff members who are interested in working on this process.

- Involve occupational programs that are generally chosen by ABE students or programs that students seem to have problems entering and being successful in.
- A followup is useful in identifying student needs. This followup would include ABE graduates not involved in occupational programs and ABE graduates enrolled in occupational programs.
- This process could be included as a part of the curriculum development process in vocational schools.

Evaluation

The advisory committee and the participants of the dissemination workshops completed an evaluation of this project. Their evaluations were high as evidenced in Tables III-6 and III-7. The responses to the open-ended questions are included in Appendix H.

Conclusions

From the interviews, the pilot testing and dissemination of the transition process, the researcher arrived at the following conclusions.

Many staff members are concerned about the attrition rate in our schools. This includes not only ABE students, but also the general student population. This concern has been expressed and implemented in a variety of ways. These professionals should be applauded for their concern for our students.

ABE is an effective program. Students have reflected a need for even more preparation to increase their success in other educational programs. Some students have asked for more structure at the end of their ABE program so they are better prepared to accept the demands of another program. They have also asked for more books, more teachers and more time.

Table III-6

PROJECT EVALUATION

ABE ASSESSMENT PROJECT

ADVISORY COMMITTEE

Directions: Please circle the response that most closely represents your feelings toward the management and products of the ABE Assessment Project. The scale is:

1 = SD = Strongly Disagree
2 = D = Disagree
3 = U = Undecided
4 = A = Agree
5 = SA = Strongly Agree

Statements	N = 6	Mean	S.D.
1.	I feel the project was worthwhile	4.33	.52
2.	The staff was qualified to undertake this project	4.50	.55
3.	The project objectives were accomplished	3.67	.52
4.	Better procedures could have been used to accomplish project objectives	3.00	.89
5.	I was kept informed of project activities	4.40	.55
6.	More people should have been aware of the project	2.50	.55
7.	The dissemination process used in this project is effective	3.50	.55
8.	The advisory committee meetings were worthwhile	4.50	.55
9.	The products of the study (assessment manuals) will be useful	3.83	.41
10.	This project needs continued study	3.67	.82
11.	This project could be extended or expanded to help more vocational educators	4.33	.52

Comments or Suggestions:

Table III-7

Project Evaluation - ABE Assessment Project

Directions: Please circle the response that most closely represents your feelings toward the management and products of the ABE Assessment Project.

1 = SD = Strongly Disagree
2 = D = Disagree
3 = U = Undecided
4 = A = Agree
5 = SA = Strongly Agree

Statements	N = 43	Mean	S.D.
1.	I feel the project was worthwhile	4.38	.54
2.	The staff were well prepared in conducting the workshop	4.61	.66
3.	The project objectives were accomplished	4.09	.65
4.	I hope that we can use this process in our school next year	4.09	.75
5.	More people should become aware of this project	4.50	.60
6.	The dissemination process used in this project is effective	3.91	.72
7.	This process could be helpful in our school	4.42	.63
8.	The products of the study (assessment manuals) will be helpful	4.26	.54
9.	The project needs continued study	4.11	1.08
10.	This project could be extended or expanded to help more vocational educators	4.40	.62

11. Would you like assistance in implementing this process during the next school year?

8	1. No
17	2. Yes

12. Comments or Suggestions:

Thank you for responding.

Students have indicated problems in basic skills, study skills, career awareness, and personal/social skills during the transition from ABE to occupational programs.

The process developed in this project examines course content and occupational requirements so the information can be conveyed to the student considering that occupation. This process helps the student become more familiar with program and occupational requirements before entering them. This process has been viewed as a viable and valuable information system for the ABE program.

Recommendations

The following recommendations are submitted for consideration.

- A regular followup of ABE students to determine their needs during the transition from ABE to other educational programs. This would not only increase the students' success in other educational programs, but also enhance the ABE program. This followup should include ABE students who do continue with further education and those who do not continue.
- Consider short term and/or part time occupational programs. ABE students often have time limits, personal and family problems and financial difficulties which dampen their motivation to remain in long term programs. Short term or part time training programs might alleviate some of the stress students feel when they are enrolled in full time programs.
- A revision of financial assistance programs to correlate with short term and part time programs would be very beneficial. Many ABE students could not continue with their education without taking advantage of these programs. But most financial assistance is based on full time program participation.

- The ABE program should focus on the problem areas of basic skills, study skills, career awareness, and personal/social skills.
- Counseling services, both school and internal agencies, should re-evaluate their services in relation to their effectiveness in aiding students with these programs.
- Implement the career education component into ABE programs. A state-wide career education project is already underway in many ABE programs.
- Suggestions for further study include:
  - determine the effects and influence of career education on ABE students.
  - determine the effect of the individual occupational instruction in reducing student attrition.
  - determine significant factors contributing to program choice.
  - determine the relationship of skills taught in current occupational programs to those actually required on the job.

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APPENDIX A

VITAS OF PROJECT STAFF

APPENDIX B

ADVISORY COMMITTEE MEMBERS

ADVISORY COMMITTEE MEMBERS FOR

ADULT EDUCATION/VOCATIONAL PROGRAM TRANSITION PROJECT

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APPENDIX C

ADVISORY COMMITTEE MINUTES

ABE Assessment Project

Advisory Committee Meeting

September 14, 1977

Members Present: Dale Borer, Jerry Dunnum, Robert Durall, John Gindt, Everett Hooks, Shirley Lotze, Thomas R. Maronek, James Mueller, Arlyss Grosskoph, Keith Valiquette Orville Nelson, Dale Moseman, Joy Bergstrand

Orientation:

- Brief welcome.
- Introduction of members.
- Overview of historical background and need for project.

Project Objectives:

- Review of project objectives.
- "The overall goal of this project is to develop a process which can be used to identify entry level competencies for selected occupational clusters so that the ABE program can better prepare their participants to enter and have some measure of success in an occupational training program."

Advisory Committee:

- Overview of the role of the advisory committee in assisting project with direction for activities and schedule.

Staff:

- Review of staff members involved in project.
  WWTI-Arlyss Grosskoph
  Keith Valiquette
  U.W.-Stout-Orville Nelson
  Joy Bergstrand
  WBVTAE-Jim Mueller
  Charlotte Martin

Project Activities:

- Briefly the activities of this project include:
  - Identify and utilize competency analysis of an occupational program to analyze entry level competencies needed by all students.
  - Develop model for analyzing entry-level competencies, and revise as needed.
  - Determine problems/barriers of ABE students entering occupational programs.

- Predict and monitor the success of selected ABE/GOAL students in an occupational program.
- Validate results by:
  - applying to another program within WWTI
  - applying to another VTAE school in Wisconsin
- Disseminate results of project.

- After reviewing project activities, the following points were made:
  - The analysis of competencies needed in courses needs to include visits to the classroom as well as analysis of curriculum.
  - Teachers, as well as ABE students should be interviewed to identify problems/barriers.
  - The second advisory committee meeting should be held early enough so it can review the model before it is validated.

Identification of Possible Barriers:

- From a very lively discussion, the following is a list of possible problems/barriers encountered by ABE students:
  - Administration: limitations on procedures, activities, time, etc.
  - Counselors: students often need more contact.
  - Instruction: including methods, techniques and possibly personality factors.
  - Curriculum
  - Academic: study and basic skills.
  - Personality: students must have personality traits required of workers, i.e., occupations can be people, data or thing oriented.
  - Communication
  - Career awareness/knowledge
  - Aptitude ability and interest appropriate to program
  - Goals: unrealistic, influenced by expectations of parents, self, and peers.
  - Priorities and values: time, money and goals.
  - Attitudes: feelings such as "I can not make any money on this program."
  - Human relations skills.
  - Coping skills-ability to adjust.
  - Decision making skills
  - Motivation/maturity
  - Health, strength, physical coordination.

Procedure for Pilot Testing:

- The criteria for identifying a pilot test site were:
  - a school with a different structure from WWTI.
  - ability to identify ABE students for interviews.
  - receptiveness to the study.

Other factors for consideration of the pilot test site could include:

- comparison of a schools with a GOAL program with a school not exposed to GOAL.
- comparison of schools in an urban area to those in a rural area.
- a program which is competency based.

Communications Bulletin:

- The communication bulletin describing the ABE Assessment project was reviewed.

ABE Assessment Project

Advisory Committee Meeting

December 14, 1977

Members Present: Robert Durall, John Gindt, Everett Hooks, James Mueller, Arlys Grosskoph, Keith Valiquette, Orville Nelson, Joy Bergstrand

Introduction:

Interview Instrument & Procedures:

- 3 forms developed: Form 1 (blue) student-for former ABE students in occupational programs.
  Form 2 (yellow) dropout-for former ABE students who dropped out of an occuaptional program.
  Form 3 (pink) teacher/coordinator-for ABE and occupational teachers and coordinators.
- 126 students interviewed; 104 ABE students in occupational programs, 22 ABE students who had dropped from an occupational program.

Interview Results:

Comparisons of student (form 1) and dropout (form 2) interviews:

- of student interviews, approximately 50% were male, 50% female.
- of dropouts, more than 75% were male.
- most interviewees fell within the age group of 20-29, but dropout enterviewees were slightly older.
- Students and dropouts closely agreed that high school equivalency was a goal in ABE. But nearly twice as many dropouts came to ABE to improve study skills.
- The reasons for enrolling in occupational courses were similar, although dropouts responded more frequently to 'getting a job' and 'learning a new skill.'
- More dropouts than students responded that ABE helped them in their occupational program.
- Twice as many dropouts as students responded that they used ABE after enrolling in an occupational program.
- The reasons for dropping out of occupational programs were related to personality, career awareness and academic reasons. Financial problems were indicated half as often; getting a job was not indicated at all.

- The major problems identified were in the major areas of basic skills (math, reading, writing), study skills, career awareness, personal/family problems.

Process Development:

- The process involves closing the gap between ABE and occupational programs.
- Samples of the course will be taken from the first two weeks, the middle week, and the last two weeks to be used in a manual for the students and teacher.
- These materials will be analyzed:/Students readiness will be determined using:
  - readability-Fry or Smog readability formulas
    cloze procedure
    individual reading inventory
  - terminology-determine vocabulary skills and types of words students need to know.
  - math/science-level needed to enter class.
  - study skills-types of learning modes the student needs for the class.
  - career awareness-the student needs to take a good look at him/herself, the career, and the program before entering.
- The committee decided the manual should be used with options available to the instructors and students.

Validation Selection:

Criteria for selecting a validation site were developed.

- different from WWTI
- climate of school
- rural/urban setting

Indianhead VTAE district was selected.

Adjournment:

ABE Assessment Project

Advisory Committee Meeting

March 17, 1978

Members Present: Dale Borer, Everett Hooks, Shirley Lotze, Tom Maronek, Charlotte Martin, Arlyss Grosskoph, Keith Valiquette, Orville Nelson, Joy Bergstrand

Overview of Project Objectives:

- The goal of this project is to develop a process to identify entry level competencies of specific occupational programs so that ABE students can be better prepared to enter and have some success in the occupational program.

Overview of Process:

- The steps of the process for determining and assessing entry level skills was discussed.

Step 1: Collect Materials Used in Program: A sample of all materials used in the program is taken from the first two weeks, the middle week and the last two weeks of the program.

Step 2: Identify Critical Tasks: With this task analysis, tasks can be identified that are critical to the occupation. These tasks can provide the basis for developing assessment instruments.

Step 3: Identify Critical Concepts and Entry Level Skills: From the analysis, critical concepts - cognitive, psychomotor or affective - can be identified and used for the assessment instruments.

Step 4: Develop Assessment Instruments: Based on the tasks and skills identified in steps 2 and 3, assessment devices can be designed. These could fall into five categories:

a. Comprehension skills
b. Computation skills
c. Affective skills
d. Physical skills
e. Occupational Knowledge

Step 5: Synthesize into student and teacher manuals.

- The committee asked that more emphasis be placed on the basic skill areas, since another project is working with career awareness activities.
- The committee also asked that a list of competencies for each area be included in the teacher's manual. The list would be subdivided for the first two weeks, the middle week and the last two weeks.

Discussion of Project Dissemination:

- The dissemination workshops were discussed:

1. Agenda - a copy is attached.
2. Dates and locations -

   May 3 at Midway Motor Lodge - Hoffman House (Wausau)

   May 11 at Waukesha

   May 12 at the Sheraton (Madison)

3. The procedure for relaying the information - a letter to each district director, with a carbon copy to instructional services, will be sent requesting participation.

A Look Ahead:

Proposals that have been written include:

1. A second phase to this project, ABE Assessment, establishing norms for the areas developed, and applying the process to other areas.
2. Wisconsin ABE Career Education Project

Adjournment:

APPENDIX D

PROJECT SUMMARY

ABE Assessment Project

PROJECT TITLE:

- Development of a Mechanism and Standards For The Assessment of Adult Basic Education Students As They Relate to Post-Secondary Vocational Education Programs

FUNDING SOURCE:

- Funded by the Wisconsin Board of Vocational, Technical and Adult Education with Adult Basic Education (309) Funds.

MAJOR OBJECTIVES:

This project intends to develop a process which will reduce the attrition rate of ABE students entering occupational programs. To accomplish this goal, the project will:

- Develop a process to identify entry level competencies needed in occupational programs.
- Develop a procedure to assess ABE students' competencies. With this assessment, potential difficulties may be identified, and with additional preparation, the ABE student may be successful in the transition from the ABE program to an occupational program.

MAJOR ACTIVITIES:

Briefly, the activities of this project include:

- Identify and utilize competency analysis of an occupational program to determine competencies needed to enter the program.
- Determine problems/barriers of ABE students entering occupational programs by interviewing ABE students in occupational programs, ABE students who have dropped from an occupational program, and their instructors.
- Develop a model incorporating the results of these two analyses.
- Field test results by transporting the process to another program and another school.
- Disseminate results through workshops.

STAFF INVOLVED:

This project is jointly conducted by Western Wisconsin Technical Institute and UW-Stout. Staff members involved are:

- WWTI - Arlyss Grosskoph
  Keith Valiquette
- UW-Stout - Orville Nelson
  Joy Bergstrand

APPENDIX E

SURVEY INSTRUMENTS

Form 1

CVTAE
10/77

ABE Assessment Project
Student Opinionnaire

1. School: _____

2. Program: _____

3. ___Traditional Occupation

___Non-Traditional Occupation

4. Sex: ___1. Male

___2. Female

5. Age: ___1. 19 and Under
___2. 20-29
___3. 30-39
___4. 40-49
___5. 50-59
___6. Over 60

6. How long were you enrolled in the ABE/GOAL program?

___1. Up to 1 month
___2. 1 to 3 months
___3. 3 to 6 months
___4. One year (2 semesters/3 quarters)
___5. 1 to 2 years
___6. More than 2 years

7. Why did you enroll in ABE/GOAL?

___1. For high school equivalency
___2. To improve study skills
___3. To learn/improve English
___4. Encouragement from family
___5. Other_____

8. Why did you decide to enroll in a vocational program?

___1. To get a job
___2. To learn new skills
___3. To meet employer requirements
___4. CETA or other assistance program
___5. Recommendation from Job Service counselor
___6. Recommendation from ABE instructor
___7. Recommendation of other students
___8. Reputation of the school or particular program
___9. Other_____

9-14. What types of difficulties did you have?

___9. General Education
- ___1. math
- ___2. writing/speaking
- ___3. reading
- ___4. study skills
- ___5. relevant class or teaching techniques
- ___6. other_____

___10. Occupational Classes
- ___1. terminology
- ___2. student's background and experience
- ___3. physical strength and coordination
- ___4. other_____

___11. Teaching Strategies
- ___1. structure of classes
- ___2. pace of classes
- ___3. teachers
- ___4. other_____

___12. Career Development Skills
- ___1. adequate knowledge of field
- ___2. ability and interest appropriate to field
- ___3. realistic goals
- ___4. other_____

___13. Personality
- ___1. human relations skills
- ___2. compatible with field of study (persons, data, things)
- ___3. appropriate values
- ___4. motivation/maturity
- ___5. ability to adjust
- ___6. other_____

___14. Miscellaneous
- ___1. problems with entering school (i.e. registration, financial aid)
- ___2. insufficient or inadequate counseling help
- ___3. personal or family problems
- ___4. financial
- ___5. job schedule
- ___6. inadequate time
- ___7. other_____

15. Did your ABE program help you with your vocational program?

- ___1. Yes
- ___2. Somewhat
- ___3. No

16. Have you utilized ABE since enrolling in a vocational program?

___1. Yes
___2. No

17. How has ABE helped you?

18. How could ABE help you even more? (What additional skills did you need?)

19. What are your plans for next term?

COMMENTS:

Form 2

CVTAE
10/77

ABE Assessment Project
Student Opinionnaire

1. School: _____

2. Program: _____

3. ___Traditional Occupation

___Non-Traditional Occupation

4. Sex: ___1. male

___2. female

5. Age: ___1. 19 and Under
___2. 20-29
___3. 30-39
___4. 40-49
___5. 50-59
___6. Over 60

6. How long were you enrolled in the ABE/GOAL program?

___1. Up to 1 month
___2. 1 to 3 months
___3. 3 to 6 months
___4. One year (2 semesters/3 quarters)
___5. 1 to 2 years
___6. More than 2 years

7. Why did you enroll in ABE/GOAL?

___1. For high school equivalency
___2. To improve study skills
___3. To learn/improve English
___4. Encouragement from family
___5. Other_____

8. Why did you decide to enroll in a vocational program?

___1. To get a job
___2. To learn new skills
___3. To meet employer requirements
___4. CETA or other assistance program
___5. Recommendation from Job Service counselor
___6. Recommendation from ABE instructor
___7. Recommendation of other students
___8. Reputation of the school or particular program
___9. Other_____

9. How long were you enrolled in a vocational program?

___1. Up to 1 month
___2. 1 to 3 months
___3. 3 to 6 months
___4. One year (2 semesters/3 quarters)
___5. 1 to 2 years
___6. More than 2 years

10-15. What types of difficulties did you have?

___10. General Education
- ___1. math
- ___2. writing/speaking
- ___3. reading
- ___4. study skills
- ___5. relevant class or teaching techniques
- ___6. other_____

___11. Occupational Classes
- ___1. terminology
- ___2. student's background and experience
- ___3. physical strength and coordination
- ___4. other_____

___12. Teaching Strategies
- ___1. structure of classes (individual, group oriented)
- ___2. pace of classes
- ___3. teachers
- ___4. other_____

___13. Career Development Skills
- ___1. adequate knowledge of field
- ___2. ability and interest appropriate to field
- ___3. realistic goals
- ___4. other_____

___14. Personality
- ___1. human relations skills
- ___2. compatible with field of study (persons, data, things)
- ___3. appropriate values
- ___4. motivation/maturity
- ___5. ability to adjust
- ___6. other_____

___15. Miscellaneous
- ___1. problems with entering school (i.e. registration, financial aid)
- ___2. insufficient or inadequate counseling help
- ___3. personal or family problems
- ___4. financial
- ___5. job schedule
- ___6. inadequate time
- ___7. other_____

16. Why did you decide not to finish your vocational program?

- ___1. Financial
- ___2. Found a job
- ___3. Went to a different school
- ___4. Academic reason (refer to question 10, 11, 12)
- ___5. Career development reason (refer to question 13)
- ___6. Personality reason (refer to question 14)
- ___7. Miscellaneous reason (refer to question 15)
- ___8. Other_____

17. How do you feel about not finishing your vocational program?

___1. Satisfied
___2. Unsure
___3. Dissatisfied

18. Did your ABE program help you with your vocational program?

___1. Yes
___2. Somewhat
___3. No

19. Have you utilized ABE since enrolling in a vocational program?

___1. Yes
___2. No

20. How has ABE helped you?

21. How could ABE help you even more? (What additional skills did you need?)

COMMENTS:

Form 3

ABE Assessment

1. School: _____

2. What is your position?

___ 1. Vocational instructor
___ 2. ABE instructor
___ 3. ABE Coordinator
___ 4. other _____

3-8. What problems do ABE students face in the transition from ABE to vocational programs?

___ 3. General Education
- ___ 1. math
- ___ 2. writing/speaking
- ___ 3. reading
- ___ 4. study skills
- ___ 5. relevant class or teaching techniques
- ___ 6. other _____

___ 4. Occupational Classes
- ___ 1. terminology
- ___ 2. student's background and experience
- ___ 3. physical strength and coordination
- ___ 4. other _____

___ 5. Teaching Strategies
- ___ 1. structure of classes (individual, group oriented)
- ___ 2. pace of classes
- ___ 3. teachers
- ___ 4. other _____

___ 6. Career Development Skills
- ___ 1. adequate knowledge of field
- ___ 2. ability and interest appropriate to field
- ___ 3. realistic goals
- ___ 4. other _____

___ 7. Personality
- ___ 1. human relations skills
- ___ 2. compatible with field of study (persons, data, things)
- ___ 3. appropriate values
- ___ 4. motivation/maturity
- ___ 5. ability to adjust
- ___ 6. other _____

___ 8. Miscellaneous
- ___ 1. problems with entering school (i.e. registration, financial aid)
- ___ 2. insufficient or inadequate counseling help
- ___ 3. personal or family problems
- ___ 4. financial
- ___ 5. job schedule
- ___ 6. inadequate time
- ___ 7. other _____

9. What suggestions do you have to reduce the attrition rate of ABE students in their transition from ABE to vocational programs?

Comments:

Thank you for your response.

APPENDIX F

OPEN ENDED RESPONSES TO SURVEY

Student Responses

How has ABE helped you?

- Wouldn't have been able to do anything without it. I highly recommend it. Gave me confidence when I passed GED. I knew I could win it. (Go into other programs.)
- Really improved my ability to think. Mini courses helped in deciding on a program. Wish they were longer.
- "Good brush course". Introduced to many new things. Really helped me emotionally-Self Confidence. Reading really helped--Reading/study skills improved.
- Passed GED - Upgraded the basic skills prior to entering Interior Design--Made the transition to the vocational program much easier.
- Improved his confidence and helped him to relate more easily with other people.
- Counseling to feel a part of society.
- Getting into gear.
- With specific problems.
- Mini courses in special areas helped.
- Understanding.
- Get a GED fast.
- Individualized.
- Lots of counseling help.
- Did most by itself.
- Strip it down.
- Very good program, good atmosphere, no restrictions.
- Learn everything over.
- Very helpful reviewing.
- Success in ABE made me succeed in Interior Design. It had the confidence to make it. The teachers wanted you to succeed, they cared. Teachers' attitudes are very important.
- Speak, understand English - Vocabulary.
- Special tutorial assistance was provided in English, Math and certain vocational and general education courses.
- Passed GED which made possible further training. Improved reading, math, and English skills.
- Basic terminology and study skills.
- Greatly helped her in English and math. GED was a major goal.
- Learned to speak and write English, to read, and perform basic computations.
- Personal satisfaction of finally finished something. GED, desire to learn, appreciation for education so many things I don't know ... I want to learn everything.
- ABE made me feel better as a person ... was in a rut. GED allowed him to enter a program at WWTI.
- Passed GED, association with various age groups in secondary education. Gave me a great deal of confidence. Never too old to learn. Really gives you the ability/opportunity to meet and work with a great variety of people.
- Really prepared him for going back to school--gave him the discipline. Really believed he could come to school. Desire to succeed. Desire to complete some things. Confident of his abilities.
- Reading really improved-understanding of people. Overall improved his general knowledge and ability to deal with a wide variety of people. Made possible his present employment. Got him through his welding.

How has ABE helped you?

- Passed GED. Prepared her for the Ward Clerk Program. ABE program helped her in Ward Clerk especially English and math. ABE was the only way she could finish school. Couldn't make high school.
- Greatly improved her math skills, study skills. Received a great deal of encouragement from the ABE staff which made the transition into Medical Technician much easier. Self confidence.
- It taught me how to study, refreshed my memory in Science, English and Social Studies and taught me enough math to pass the GED test.
- Helped with reading and special work in program.
- Learn math and grammar skills.
- OK.
- Learn English.
- Math skills.
- Lots of math.
- Lots of help in metrics and math.
- Helped get into school.
- Individual help, self motivation, record of achievement, good teachers.
- Really improved his English, math and reading comprehension.
- Passed GED - completed.
- Was able to adapt to Math, English, etc. Classes easier. Passed GED and got into a program that interested him.
- Prepared her to pass the GED. Upgraded her skills, especially math and English.
- Passed GED. Prepared her for the technical program.
- Never had a day of high school and passed GED. Helped self-confidence a lot. Really upgraded her skills to the point that she could pass the GED.
- Learned English well enough to enter a vocational program.
- Learned an adequate amount of English to enter a program.
- Really improved his English, math skills but needs even more. Got GED.
- Likes individualized; lots of help in math.
- Review of coursework.
- Somewhat needed GED. Good instructor.
- Improved study skills, confidence.
- Learning vocabulary sentence structure.
- Provided basis for courses taken. More familiar with the courses. Gave her background material she lacked, so really made the transition much easier into switching.
- Passed GED. Gained skills necessary in order to handle classes in automotive. Better attitude about school. Confidence greatly improved.
- Enabled him to pass GED. Basic skills in general upgraded, especially study skills. Helped him discipline himself.
- Really reviewed and brushed up basic skills. Well prepared for her new program, especially reading.
- Yes, enabled her to get her GED. Thus, permitting her to enter the X-Ray Technician Program.
- Basic skills. Self confidence. Self confidence seems to be especially significant.
- Academic and personal - self confidence and self assurance.
- Gave me confidence I never really had. Helped my reading, math ... to look, listen and to use my intellect.
- Brought up her math to the point that she could enter the X-Ray program. Primed her for school.
- Completed GED. Good basic into the swing of things. Study habits were improved.
- Very confident in myself. Improved self-confidence greatly ... never thought I'd have a chance like this. Also passed GED and improved basic skills.

How has ABE helped you?

- Really improved his math. Earned GED.
- Acquired GED. Really improved my reading, English and writing.
- Math, reading, spelling greatly improved.
- He feels his math and chemistry have improved but not the degree he thinks is necessary. Attitude of ABE instructors (more friendly-more human) enhanced his self-confidence.
- Helped to get math together. Really helped me assess my skills. English really helped a lot--feels was a real advantage when he began his program.
- Very well prepared for his program as a consequence of ABE. Problem develop sometimes but ABE made the transition to Machine Tool much easier.
- Acquired GED and upgraded his skills drastically. Made his vocational program much easier. Everyone was extremely helpful for any problem that would arise - school or personal. Very considerate - ABE.
- Completed GED, improved basic skills. Eager to learn. ABE wetted her appetite for additional schooling. Wants to continue her schooling even after she finishes her program. Feelings of accomplishment and satisfaction.
- Made me aware of the things I needed to know. Accomplished his goal. Got GED.
- Yes. Finally accomplished something. Getting GED made you feel good. Close to getting a job because he finished his GED-thus making him eligible for welding.
- Straightened out math problems. Improved reading skills, speed and comprehension. Gave me what I wanted.
- I'm using everything I learned here in my program. The general review and brushing up really helped.

STUDENT RESPONSES

WHAT ARE YOUR PLANS FOR NEXT TERM?

- Don't know. Depends on grades.
- Continue in EEG program.
- Continue in X-Ray Tech.
- Continue in Electronic Servicing. Everything appears to be going very well.
- Plans to continue in Drafting.
- Plans to continue in Marketing.
- Continue in Auto Body.
- Continue in Gen. Marketing.
- Continue in Industrial Hygiene.
- Continue in Accounting.
- Continue in Machine Tool.
- Continue in Food Service.
- Continue in Clerk Typist until she graduates.
- Continue in Wood Tech.
- Continue in Welding. Really likes the work.
- Continue in Wood Technics.
- Plans to continue in Refrigeration.
- Continue in A-V Technician.
- Continue in Welding.
- Continue in the Personnel Technician.
- Continue in Personnel Technician porgram. Extremely happy with the program.
- Plans to continue in Clerk Typist program.
- Continue in Technical Nursing program.
- Continue.
- Continue, then be a lawyer.
- Continue with program if financial support is availalbe.
- Finish GED, take Accounting.
- Continue, finish at end of next term.
- Going into vocational classes.
- Graduate from Interior Design. She's planning to take a job as an interior decorator.
- Plan to continue taking courses in the program.
- Continue with the X-Ray Tech. program.
- Continue in Food Science Management.
- Continue in Welding.
- Continue in Diesel Program to finish.
- Continue in Clerk Typist.
- Hopes he can continue in the program, but his work may force him to quit - unsure at this time.
- Continue in Audio-Visual Technician - graduates this year - plans to continue his studies at Stout.
- Continue in General Marketing.
- Continue in Welding.
- Continue in the program - graduates in June.
- Continue in Data Processing.
- Classes.
- Unsure. Probably drop Marketing and look for a job.
- Go into Cosmotology.
- Don't know.
- Don't know depends on grades.

- Working. Completed program. Welding at a local plant.
- Working as a welder. Completed program.
- Graduating from Legal Secretary and starting at University of Wisconsin-La Crosse.
- Graduated from 2 yr. Accounting program. She's presently looking for a job.
- Graduated from Food Service program. Presently is working as a waitress and nurse's aide.
- Graduated from Institutional Foods. Presently he's working as a painter/carpenter.
- Graduated from program. Working as an activity aide at a nursing home for the elderly.
- Graduated. Working for Perkins Cake & Steak. Hopes to eventually assume managerial responsibilities.
- Graduated - presently working in field.
- Will be teaching for WWTI in the foods area - (CETA - Kitchen Helper Program).
- She's working at the present time - completed her program.
- Presently in working as a welder - plans to continue - finish his program.
- Presently working as a ward clerk - completed the program.

Non-completer responses

How could ABE help you even more? (What additional skills did you need?)

-Additional work in reading, math, study skills, English
-His math needs further improvement--but he wants to find a field of training that meets his needs and interest--
-Data Processing did not.
-Felt he needed additional time in ABE--too limited an experience in ABE.
-ABE did as much as it could for him--personal problems need to be resolved.
-Quite satisfied. Thinks he'll return later this winter to do additional work in math.
-Academic skills are OK.
-Much more time needs to be spent on his English and Spelling.
-I should have waited before going into a program. School routine was difficult to adjust to.
-Wants to return to work on additional math and reading.
-Feels ABE did what it could--the problem is him.
-ABE was an excellent experience and opportunity.
-Needs additional math--didn't realize how difficult the math would be.
-The ABE experience was extrmely beneficial. She was ready for a program when she left ABE.
-Feels needs were met.
-He feels ABE met his needs at the time. He may return at some point for additional work in reading and math.
-Even though she will not continue in accounting she feels she had learned a great deal about accounting, and her abilities as they relate to a career. She plans to start in Retail Sales next quarter at WWTI.
-Academics--he felt were adequate. Additional information on his new program AV technician would have been useful. He knew very little about the program--"each quarter was a surprise."
-He feels he accomplished all that he could in ABE--feels he needs to do some serious thinking about an occupation that is appropriate to his personality.

Non-completer responses

How has ABE helped you?

-"ABE got you up on the edge of your chair--you wanted to dive into a program."
-Completed GED--upgraded basic skills reuse of accomplishment and satisfaction.
-Greatly improved her basic skills, reading, writing, math, self-concept, confidence. Never thought she could return to school and begin a second career at this late a time in life.
-ABE helped make the transition to a full time program easier. He had been out of school for many years and was quite uneasy about returning to school (confidence).
-Upgraded basic skills, improved job performance.
-Improved self-concept and confidence--"ABE helped me to adjust to the classroom and people" it brought me out.
-Improved basic math skills--but still needs much more.
-Upgraded skills--really improved in English and math.
-"Really enjoyed program" Individual pace really suited him--really helped him in the vocational career and on the job at the present time.
-Acquired GED--greatly improved math skills.
-Helped him get a pay raise, his family, friends were very happy that he got his diploma. He was very happy and felt achievement.
-Improved basic skills--got GED.
-Improved basic skills but not to the level he feels is adequate.
-Enabled her to enter program at WWTI.
-Completed GED--which opens many doors for him but he feels he has many things to work out for himself before he can successfully enter another program.
-English and math greatly improved.
-The atmosphere in ABE made him want to come to ABE. Really relaxed him competing with himself not someone else.
-ABE really brought up even more trouble in the program if he had not attended ABE.
-He was very weak academically--the basic skills were improved but not to the level he felt necessary.

Non-completer responses

Did your ABE program help you with your vocational program?

Just didn't stay long enough in ABE.
Yes, but feels he needed additional time in ABE before starting a program
He felt additional time in ABE was required before he started the woods program--very little self-confidence and personal objectives were uncertain.

Non-Completer Responses

Did your ABE program help you with your vocational program?

- Just didn't stay long enough in ABE.
- Yes, but feels he needed additional time in ABE before starting a program.
- He felt additional time in ABE was required before he started the woods program--very little self-confidence and personal objectives were uncertain.

Student Responses

How could ABE help you even more? (What additional skills did you need?)

-Feels his needs were adequately met.
-Feels his needs were met. Quite confident of his abilities at this point.
-She feels ABE met her needs. She's very satisfied with the experience in ABE.
-Doesn't know--ABE prepared him very well.
-He's very satisfied with his accomplishments in ABE. Feels he's very well prepared for the program.
-Feels ready at present. No problems so far.
-No--Got exactly out of it what I wanted.
-No problems with academics. Carried a 4.0 average.
-Feels well prepared for her program. Got exactly out of ABE what she wanted. Permitted her/provided her with the skills and opportunity to start a new program.
-She had a limited amount of time to spend in ABE. She felt the time in ABE was very profitable. Her reading and English were still in need of polishing but those skills were more than adequate to get her through the program.
-She felt ABE met her needs very adequately.
-She was very complimentary of ABE. Felt her preparation in ABE was instrumental in the completion of Food Service Management Program.
-He feels he accomplished his personal goals. Namely the GED. Improvement of basic skills, and now the completion of a program. He is not interested in further schooling.
-Feels preparation was adequate.
-No - very adequate. Teachers really bent over backwards for her.
-Feel quite adequate at this point in time.
-Very satisfied. I can always come to ABE for help. Nobody looks down on you. Don't realize how scary it is to come back to school at an older age.
-Very satisfied.
-Couldn't think of anything.
-Very satisfied. Teachers are very close to the students in ABE. They are concerned and interested about the student.
-Additional work in math would be helpful.
-Needs were met. Feel quite confident about her abilities.
-She had a limited amount of time to spend in ABE. She felt the time in ABE was very profitable. Her reading and English were still in need of polishing but those skills were more than adequate to get her through the program.
-Very satisfied.
-Now and then upper level math is a problem, so he comes to ABE for assistance.
-Additional work in math would be helpful--advanced Algebra, etc.
-Make greater demands of the student. There's a lot of home work in their program.
-Needs additional work in math and reading.
-Additional English would be helpful.
-Additional English.
-Needs additional work in English and math.
-Additional math would be useful.
-She feels reading is still a problem for her--desires further training and study in order to bolster reading abilities.

How could ABE help you even more? (What additional skills did you need?)

-Additional work in math would be useful. Otherwise seems quite satisfied.
-He feels academically that he's in pretty good shape, but his choice of program was very poor. He feels he was led astray in his choice of a program.
-He'll probably continue to come to ABE periodically as the need arises. Overall he feels very confident about himself. Feels he spent an adequate amount of time in ABE.
-Plans to spend additional time in ABE in order to further upgrade his math.
-He feels his speech, writing still are not at the level they should be. Additional work will probably be required.
-Additional work in math and Chemistry.
-Apparently still would like to do additional work in advanced trig.
-Math: Binary No's., Hexadecimal, Octo, Converting them to and from decimal.
-Would like more structure, don't like individualized.
-Full time program.
More materials.
-Advance to level of coursework.
-Partitions to separate people. Cut down on noise.
-More tiem.
-Counseling for program.
-Very good.
-Go deeper into areas. Does not like audio-tutorial.
-More teachers.
-More teachers
Splitting classes into formal/informal.
-More challenging formal activities. Structure-more direction.
-More English.
-Coordinate with other state agencies.
-Would like more structured learning.
-Terminology
Prep. for classes.
-More ABE teachers.
-More room.
-More awareness of programs.
-Enlarge it.
-More space for students.
-More teachers to help with English skills.
-More teacher time. Would rather be in classroom-type situation.
-Consumer ed type classes, prepare for job applications.
More individual help, counseling program for drug abuse.
-Tour of GOAL facilities. More publicity. More involvement in career Awareness.
-More reading exercises.
-Information sheet on what's available, individual guides on the use of machines.
-Lots of math.
-Additional math work would be helpful. He feels he is still weak in that area.
-None.
-Additional reading. English would be very beneficial.
-ABE apparently met his needs. At present, doesn't feel the need to utilize the services of ABE.
-ABE met her goals. Really got her prepared for further training.
-Feels his needs were met. Passed GED. Really is doing well in his program.
-She plans to return to ABE for additional help in English.
-Needs additioanl work in math, English and reading.
-Additional English and math. Also reading.

APPENDIX G

AGENDA
DISSEMINATION WORKSHOP

AGENDA

ABE Transition Project
Dissemination Workshops

9:00 - 9:15	Coffee and Registration
9:15	Welcome
9:30 - 9:45	I. Overview of Project - objectives - activities
9:45 - 10:15	II. Survey Results
10:15 - 11:30	III. Results of Pilot Tests of Process - overview of process - review the manuals developed
11:45 - 1:00	Lunch
1:00 - 3:00	IV. Simulate the Process - collect sample materials - identify critical tasks and concepts - design appropriate assessment instruments
3:00 - 3:30	V. Incorporating the Process in Your School
3:30 - 4:00	VI. Summary - future applications - additional testing
4:00	Adjourn

APPENDIX H

PROJECT EVALUATION
OPEN-ENDED COMMENTS

Would task analysis be necessary? Is listing the skills and knowledge necessary? Couldn't the course syllabus for each of the courses be used instead.

This would have to be explained district by district. I doubt the occupational instructors will be willing to go into the detailed work of breaking down tasks all for the benefit of ABE students. I "guess" they view them as a very small part of their student numbers.

Workshop Good!

This project parallels my feelings about the educational process. I'm happy to see this initiated.

Have instructor bring compentency for their area's - or List Of Tasks.

Less reading from handouts to the audience.

I feel that all the information given in this workshop was in tune with the project. I definitely think this would be of extreme value as part of our inservice/orientation programs and plan to make that recommendation to our inservice committee. Thank you.

The group meeting were very good.

Time must be made available to get people together to work on processes such as this. It doesn't happen just because we made the meeting and think that its valuable.

We are looking at development/revision of curriculum guides. This process will be considered by our staff as one method of development.

The communication between ABE and Voc. Instructors is becoming more of an importance and more has to be done in this area.

Excellent Program.

I sincerely hope we will be able to implement some of these ideas.

Should disseiminate to VTHE administrators and voc. teachers - maybe at Prof. Growth Week.

As always time is the factor.

Well done and I'm very much interested in beginning implementation.

Have both VETAX and Dacum to work from, plus have people who know compentency based educators.

A longer workshop would be nice.

I haven't decided as yet if we will use this.

APPENDIX I

THE TRANSITION PROCESS

PROCEDURES MANUAL

FOR ABE TRANSITION PROJECT

June, 1978

Table of Contents

	Page
Introduction	1
Step 1: Collect Materials Used in Program	2
Step 2: Identify Critical Tasks	3
A. Obtain/Develop a Task List for Job	4
B. Select Sample of Tasks	5
C. Identify Tasks Included in Instructional Samples	6
Step 3: Identify Critical Concepts in Entry Level Skills	8
Step 4: Synthesize Information	11
A. Comprehension Tasks	13
B. Math Tasks	15
C. Psychomotor Skill/Hierarchy	17
D. Reading Analysis	18
Step 5: Develop Student Assessment Scales	19
A. Comprehension Skills	20
1. Readability	21
2. Cloze Procedure	24
3. Reading Analysis	25
4. Individual Reading Inventory	27
5. Vocabulary	28
6. Reference Skills	29
B. Computational Skills	30
C. Affective/Attitudinal Skills	31
D. Occupational Knowledge	33

Introduction

The purpose of this manual is to develop a system which will help the Adult Basic Education student become more familiar with specific occupational programs. Because the manuals are composed of a variety of assessment devices, the student can compare himself/herself to the skills, knowledge and attitudes needed to enter the occupational program. With this information, the student can decide to enroll in the program, upgrade his/her skills for the program or consider another program.

The process of developing the manual will be discussed step-by-step. The flow chart on the next page gives an overview of the total process.

The ABE Transition Process

Step 1: Collect Materials Used In The Program.
Step 2: Identify Critical Tasks.
Step 3: Identify Critical Concepts In Entry Level Skills.
Step 4: Synthesize Information.
Step 5: Develop Student Assessment Scales.

Step 1: Collect Materials Used in Program.

The first step is to collect information to use in the manuals. To do this, take samples of everything done in the class or program during the first two weeks, the middle week and last two weeks of the first semester. The samples should include lesson plans, lecture and demonstration notes, homework and lab assignments, handouts, titles of films and filmstrips--everything. This information will be used to determine the types and content of the assessment devices.

Place each of the three sets of materials in a folder. Information from the first two weeks should be in one folder, labeled beginning; from the middle week in the second folder; and the last two weeks in a folder labeled end. The materials in the folders will be used in the steps that follow.

Step 2: Identify Critical Tasks.
A. Obtain/Develop a Task List for Job.
B. Select Sample of Tasks.
C. Identify Tasks Included in Instructional Samples.

Introduction

The vocational program will include many tasks which must be performed at a level appropriate for the jobs related to the program. In order to identify relevant skills, it is essential that a sample of tasks be selected for use in selecting them. It is important that these critical tasks be representative of the tasks that students will need to perform in the program and are ones which, in the past, have proven to be barriers to successful completion of the program. Critical tasks would also include those which are unique to the program being analyzed. Tasks which are relatively easy to perform and are within the capabilities of most, if not all people, would not be very valuable in specifying the critical skills. They would not tell us about the student's potential for success in the program and occupations related to it. Moreover, they would not provide the student with useful information.

A. Obtain/Develop a Task List for Job

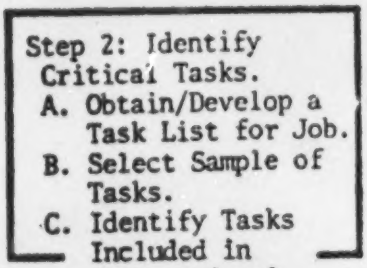
Three major steps are involved in the identification of critical tasks. First, the occupational instructor should review the task analysis used for designing his/her program. If one is not available, relevant task analyses may be obtained from several sources.

B. Select Sample of Tasks

The next step is to select the critical tasks which will be used to identify the basic skills needed. These tasks should include those which are basic or central to successful performance in the job and those which are unique to it.

C. Identify Tasks Included in Instructional Samples

The next step is to identify the tasks included in the instruction samples which have been identified in Phase 1. Any tasks encompassed in these samples which were not on the list should be added to it.


Step 2: Identify Critical Tasks.
A. Obtain/Develop a Task List for Job.
B. Select Sample of Tasks.
C. Identify Tasks Included in Instructional Samples.

OBTAIN/DEVELOP A TASK LIST FOR JOB

Many vocational programs are based on a task analysis. Therefore, a task listing for the job(s) related to the program would be available. If a task listing is not available, the vocational instructor or instructors involved should review ERIC to determine if a task analysis is available. A computerized ERIC search requesting studies with the descriptors - job analysis, task analysis, or occupational analysis for the job(s) related to the program should be run. This search can be conducted through the Wisconsin Research Coordinating Unit at the WBVTAE (Contact Dr. Sherman Ansell 608/266-7848 or Roland Krogstad 608/266-3705).

Wisconsin is a member of the VTECS consortium. VTECS is a consortium of 15 states. Each state is responsible for developing a task analysis (catalog) for selected occupational areas. At the present time, 29 catalogs are available. Each catalog includes a task listing which identifies the frequency with which the task is used in the occupation, performance objectives related to each task, criterion referenced evaluation measures and general steps of procedure involved in the task. Most VTAE districts have copies of these catalogs. Also, the WBVTAE has a set in the Research Coordinating Unit.

If a task analysis is not available through one of these sources, contact could be made with the Center for Vocational Studies at UW-Madison (608/263-2714) or the Center for Vocational, Technical and Adult Education at UW-Stout (715/232-1382). These centers may have task analyses conducted by graduate students and vocational educators available for use.

If a task analysis is not available, it may be necessary to conduct one. These are useful in curriculum planning as well as for this process. For technical assistance in designing and conducting a task analysis, contact the Center for Vocational, Technical and Adult Education at UW-Stout (715/232-1382).

Step 2: Identify Critical Tasks.
A. Obtain/Develop a Task List for Job.
B. Select Sample of Tasks.
C. Identify Tasks Included in Instructional Samples.

→ SELECT SAMPLE OF TASKS

Basic responsibility for this step in the process should be given to the vocational instructor. However, it would be valuable to include an ABE instructor in the process. This would allow the ABE instructor to gain a better understanding of the nature of the jobs and the content of the vocational program. In addition, input from the advisory committee for the vocational program would be very useful. Advisory committee members could confirm the basic and unique tasks.

Critical Tasks. A critical task is one which is an essential part of the job(s) related to the vocational program and one which requires some special competencies in order to complete it successfully. A critical task is one which is essential to successfully complete the job. It is also one which differentiates those who have the capability to perform successfully on the job and those who do not. A task which most anyone could perform would not be a critical task.

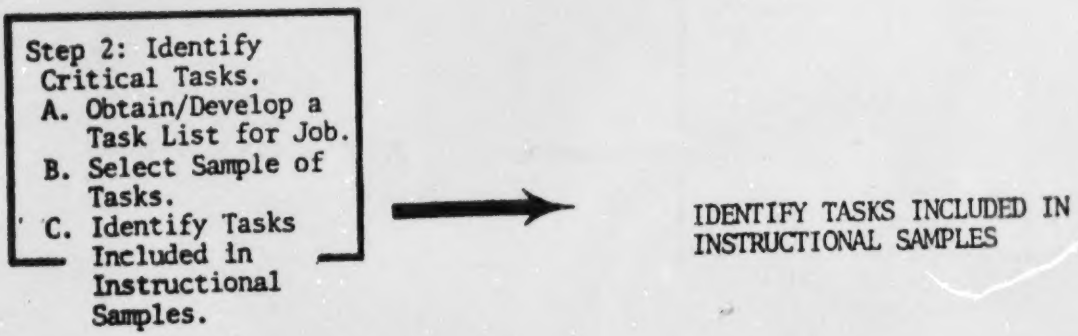
Since time for the ABE assessment process is limited, it is important that a sample of critical tasks be identified. These tasks should be ones which would assist the instructor and student to determine the student's potential for completing the vocational program and successfully entering the jobs related to it.

Basic Critical Tasks. A basic task is one which is done frequently and is essential to doing the job successfully. A basic task may be used in other vocational programs as well. For example, the ability to accurately lay out a pattern may be a critical task in welding, and also a critical task in several other occupational areas.

After a number of program areas have been analyzed, it will be possible to develop a matrix of basic tasks and relate them to the vocational programs analyzed. This would allow the student and instructor to use an assessment process to determine the student's interest and abilities related to a variety of programs without doing additional assessments.

Unique Critical Tasks. Unique tasks are those which are found only in the programs being analyzed. They are ones which differentiate the work in this program and the jobs related to it from other vocational programs.

Process. A form is included on the next page for recording the critical tasks. List the basic and unique tasks.


Step 2: Identify Critical Tasks.
A. Obtain/Develop a Task List for Job.
B. Select Sample of Tasks.
C. Identify Tasks Included in Instructional Samples.
IDENTIFY TASKS INCLUDED IN INSTRUCTIONAL SAMPLES

After the basic and unique critical tasks have been identified, the instructional samples should be reviewed to determine how many of the basic and unique tasks are included in them. Additional critical tasks may be observed in the instructional samples. These should be added to the list developed in Step B. Once this has been done, you are ready for the next major step in the analysis process. This will be discussed in more detail in Step 3.

Program _____ Date _____

Course _____

Basic Tasks	Unique Tasks

Step 3: Identify Critical Concepts In Entry Level Skills

Introduction

After the critical tasks have been identified, it is necessary to analyze them to determine the basic skills, technical skills, and knowledge which are critical to the success of those entering the vocational program. This process can also be used to identify the interests, attitudes and physical skills needed. The process for doing an analysis is described in the following sections.

Analysis Process

The purpose of the analysis process is to break the tasks into component parts in order to identify the psychomotor skills and cognitive knowledge required in order to successfully perform the tasks. An analysis form is included on the next page for use in completing this process. Three analy is areas are included - skills, knowledge, and physical requirements. One of these forms would be completed for each task identified in the previous phase. No doubt you will find that there is an overlap of skills, knowledge and physical requirements among tasks among this list.

Step 1. The first step would be to complete the information at the top so that the staff working with the products will know the program and task being analyzed. It is also important that the course(s) in which the tasks are taught are identified. This information will be useful in later planning.

At this stage, it is very important that the ABE and vocational instructors work together. The vocational instructors will bring a knowledge of the occupational areas to this process. The ABE instructors will bring a knowledge of the students and basic skills which should be identified in this.

Step 2. The second step would be to list the skills required in completing this task. This column would include the major steps taken to complete the task. These are "doing" steps. They will often involve manipulative activities. Performance levels should be given in each step when possible. As these are identified, be sure to leave space between them. The analyses in the other columns will be related to each of these steps.

Step 3. After the skills have been identified, each skill should be reviewed to determine the reading, math, science, and communication skills required. These are listed in the knowledge column after the appropriate skill step. Procedures and regulations related to the action steps under skills would also be listed in this column. In addition, technical knowledges related to materials, processes, and equipment would be included in this column.

Step 4. The last step in the process would be to identify any physical requirements which may be a barrier to success in the program. For example, if the task requires the individual to spend long periods of time standing on his/her feet, this should be noted. If the individual must be able to lift heavy objects, this should be reported.

Step 5. The information identified in the analysis of the task will be used in the next steps.

Program _____ Date _____

Task _____

Course _____

Skills (Doing Steps)	Knowledge	Physical Requirements (optional)

Step 4: Synthesize Information.

The information gathered in steps 2 and 3 need to be assembled into a convenient and usable form. Any format that is clear and concise can be used. The outline below is a suggestion of how information regarding the specific occupational programs can be organized.

1. Include an introduction or overview of the career and the program. This could be a school brochure; an exercept from the D.O.T (Dictionary of Occupational Titles); or any general description of the career or occupational program. This description could include the topics of job requirements, job duties, working conditions, salary, and placement.

2. Also include competencies needed to be successful in the career and the program. This information has been gathered through the task and concept analysis of steps 2 and 3. You may want to distinguish between minimal and guideline competencies. Minimal refers to competencies absolutely necessary to enter the program. Guideline competencies are the competencies needed for a more successful educational experience. This section may include task and competency analysis of the occupation, and an analysis of the basic skills, physical skills and attitudes needed to be successful in this type of occupation. Included in this manual are hierarchies of math and comprehension skills that you may use to identify the entry level basic skills and the progression of skill requirements. Also included is a psychomotor learning hierarchy, developed by Anita J. Harrow, for reference in identifying types of physical skills needed to perform specific tasks. A textbook analysis form, which communicates the type and use of the books needed for each course in the program may be helpful in preparing students for the type of reading assignments required in the occupational program.

3. A summary of the courses, course descriptions, and outlines required for the occupational program are also useful.

4. Include sample course materials such as handouts, worksheets, and vocabulary lists.

5. A list of the names of resource persons, teaching staff, employers, etc. is helpful when you have specific questions about the occupation or the program.

After you have collected the information about specific occupational programs, you may question an individual's readiness for that program. The next step contains informal assessment methods that may be used in preparing a student for a specific occupational program.

Comprehension: Reading, Speaking and Listening Tasks

Directions: On the list below, check all tasks that are needed in the occupational program.

SL = Slight
MD = Moderate
EXT = Extensive

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Reading									
1A. Forms									
1B. Charts and Tables									
1C. Notes, Letters and Memos									
1D. Manuals									
1E. Reference Books									
1F. The Newspaper									
1G. The Dictionary									
1H. Maps									
1I. Textbooks									
1J. Other _____									
Reading									
2A. Literal Comprehension . .									
2B. Evaluative Comprehension									
2C. Interpretive Comprehension									
2D. Other _____									
Listen									
3A. Literal Comprehension . .									
3B. Interpretive Comprehension									
3C. Evaluative Comprehension									
3D. Other _____									
Follow Directions									
4A. Oral Directions									
4B. Written Directions . . .									
4C. Other _____									

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Basic Writing Skills									
5A. Letters of the Alphabet . .									
5B. Copying Texts and Drafts .									
5C. Other _____									
Names, Addresses, Dates and Time									
6A. General									
6B. Other _____									
Forms and Job Applications									
7A. Write Phrases on Forms . .									
7B. Write Sentences on Forms .									
7C. Use Correct Grammar . . .									
7D. Take Notes									
7E. Write Paragraphs									
7F. Write Internal Memos . . .									
7G. Other _____									
Letters									
8A. Form Letters									
8B. Business Letters									
8C. Other _____									
Speaking Ability									
9A. Give Information									
9B. Conversation									
9C. Use Telephone									
9D. Give Directions									
9E. Other _____									
Organize Information									
10A. Sort Data									
10B. Sort Objects									
10C. Rank Data or Objects . . .									
10D. Develop Classification . .									
10E. Other _____									
Tools, Equipment and Materials									
11A. Use of Tools and Instruments									
11B. Selection of Tools, Equipment and Materials									
11C. Selection of Procedures and Methods									
11D. Analysis of Procedures and Methods									
11E. Other _____									

Math Tasks

Directions: On this list of math tasks place a check (✓) in the column that reflects the extent these math tasks are used during the first semester of the occupational program.

SL = Slight
MD = Moderate
EXT = Extensive

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Whole Numbers									
1A. Read, Write and Count . . .									
1B. Add and Subtract									
1C. Multiply and Divide . . .									
1D. Use of Calculator									
1E. Other _____									
Fractions									
2A. Read and Write									
2B. Add and Subract									
2C. Multiply and Divide . . .									
2D. Ratio									
2E. Proportion									
2F. Other _____									
Decimals									
3A. Read, Write and Count . .									
3B. Add and Subtract									
3C. Multiply and Divide . . .									
3D. Dollars and Cents (Work with money, make change, etc.)									
3E. Other _____									
Percent									
4A. Read and Write									
4B. Percentage Calculation . .									
4C. Word Problems (Applying information to practical problems)									
4D. Other _____									

	Beginning: First Two Weeks			Middle			Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Measure, Estimate, Calculate									
5A. Areas									
5B. Perimeters									
5C. Volumes									
5D. Capacity									
5E. Weight									
5F. Distance									
5G. Time									
5H. Costs									
5I. Other _____									
Measure									
6A. Read Graduated Scales .									
6B. Other _____									
Metric Measure									
7A. Distance									
7B. Distance Conversion . . .									
7C. Weight									
7D. Weight Conversion									
7E. Capacity									
7F. Capacity Conversion . . .									
7G. Temperature Conversion .									
7H. Other _____									
Graphs									
8A. Read graphs and interpret									
8B. Draw graphs									
8C. Other _____									
Geometric Figures									
9A. Forms and Figures									
9B. Angles									
9C. Draw/Sketch									
9D. Other _____									
Drawings									
10A. Read and interpret scale drawings									
10B. Draw to scale									
10C. Measure from scale drawings									
10D. Read assembly drawings .									
10E. Read schematic drawings									
10F. Draw shop drawings . . .									
10G. Other _____									
Algebra									

Psychomotor Skill Hierarchy

A model for psychomotor learning developed by Anita J. Harrow can be helpful in determining the types of physical qualities that should be assessed.

Reflex movements - This category includes involuntary movements that are present at birth which develop as the individual matures. Reflexes are basic to developing more complex behavior.

Basic fundamental movements - This includes movements that are learned during the first year of life.

Perceptual abilities - This category includes the ability to respond based on stored information. This includes subcategories of:

Kinesthetic discrimination - aware and control of body parts

Visual discrimination - focus eyes, track visual symbols

Auditory discrimination - differentiate sounds, track sounds

Tactile discrimination - differentiate textures

Coordinated activities - combinations of two or more perceptual abilities.

Physical abilities - These factors are related to physical fitness, and are important in all psychomotor activities.

- Endurance
- Strength
- Flexibility
- Agility

Skilled Movements - The skills in this category form the basis for sports.

Simple adaptive skills - these skills are adapted from simple movements (dancing, playing piano)

Compound adaptive skills - these skills use the body and a tool (tennis, golf)

Complex adaptive skills - skills that require a combination of adaptive skills

Nondiscursive communication - This category deals with facial expressions, gestures and posture.

Textbook Analysis

Directions: List the books used in the first semester's courses of the program. Then complete the requested information.

Course Title _____

Book Title	Author	Reading Level (Smog, Fry, etc.)	Type of Use			Frequency of Use			
			Textbook	Workbook	Reference	Daily	2-3 Times Weekly	Weekly	As Needed

Course Title _____

Book Title	Author	Reading Level (Smog, Fry, etc.)	Type of Use			Frequency of Use			
			Textbook	Workbook	Reference	Daily	2-3 Times Weekly	Weekly	As Needed

Step 5: Develop Student Assessment Scales.
A. Comprehension.
B. Computation.
C. Affective/ Attitudinal
D. Occupational Knowledge

ABE students have indicated difficulties with reading, math, study skills and career decisions. Use this and the analysis of critical concepts and tasks as the basis for your assessment devices. The assessment must be directly related to the class or program. Assessing skills, attitudes and knowledges that are not relevant to the specific occupational area would defeat the purpose of the assessment.

The type of assessment will vary with the tasks identified. For example, if the instructor lectures or demonstrates in class, you may include some oral assessment devices. If the students are asked to read independently, the assessment should reflect this. Or, if films, filmstrips or other A-V are used frequently, the student's visual perception, memory, and note taking skills could be assessed.

The assessment could take the form of worksheets, exercises, quizzes, games - anything that is appropriate to the class or program. Standardized tests and diagnostic kits could also be used--if they fit your needs. But informal, teacher-made instruments are usually the most effective diagnostic tool. You probably already have instruments that can be used or have good ideas for something better. If you decide to design assessment devices, consider these points:

- the topic and format of the device should be directly related to the skills needed in the class. Ask yourself, "What do I want to know?", then develop the instrument.
- Arrange the items in hierarchical order, if possible.
- Include some items which most students will answer correctly. Failure on all the items is frustrating to a new student.

This manual will concentrate on assessing the basic skills of comprehension and computation. These skills are often basic to success in the classroom. Also important are the areas of attitudes, physical skills and occupational knowledge.

The following section includes a variety of informal assessment devices. Choose the devices that are most suitable for your use.

Step 5: Develop Student Assessment Scales.
A. Comprehension.
B. Computation.
C. Affective/ Attitudinal
D. Occupational Knowledge

→ COMPREHENSION

Comprehension is defined as the ability to understand and interpret information. The two levels of comprehension include: (1) literal, which consists of understanding vocabulary, content and the organization of the material, and (2) interpretative, the skill of using the given information to anticipate meanings, generalize or evaluate. An assessment of a student's comprehension skills should include items in both the literal and interpretative levels.

In this manual comprehension includes the understanding of the spoken word (listening) and the written word (reading). A comprehension task list is included to summarize the tasks performed during the first semester of the program.

A variety of devices can be used to measure the reading materials and/or the student's comprehension level. Use the device(s) that you feel most comfortable with and are most relevant for your class and students. If there is a more appropriate method, please use it. The following pages will explain each device and give examples of how they can be used.

1. *Readability* - an analysis of printed material to determine its difficulty.

2. *Cloze Procedure* -a fill-in-the-blank exercise to evaluate a student's readiness for a specific reading material.

3. *Reading Analysis* - a look at the pace of a book by comparing the grade level and technical vocabulary in the beginning, middle and end of the book.

4. *Individual Reading Inventory* - a more traditional method in which the student reads a passage and answers related questions.

5. *Vocabulary* - a variety of several devices which can be used to evaluate the student's vocabulary recognition and the word attack skills.

6. *Reference Skills* - a device to evaluate the student's knowledge of the major reference aids found in textbooks.

A. Comprehension
   1. Readability
   2. Cloze Procedure
   3. Reading Analysis
   4. Individual Reading Inventory
   5. Vocabulary
   6. Reference Skills

→ READABILITY

Readability refers to the ease a reader will have in understanding reading material. Readability can be assessed by evaluating the reader, the reading material, or the interaction of the two. Standardized tests can assess strengths and weaknesses of the reader. Readability formulas assess the readability of the reading materials and several devices, including the cloze procedure, the individual reading inventory and vocabulary worksheets assess how well a reader can comprehend specific reading materials.

First, let's look at readability formulas. Readability formulas are guides to help you find the right materials for your students. Most formulas are based on word and sentence length, assuming that short words and sentences are easy to read. Of the multitude of formulas available, the Fry and the Smog are recommended because of their simplicity. These formulas are discussed on the following pages.

Formulas do not calculate absolute readability values. They should be used as guides. Each formula and method of analyzing a text will calculate a different score or grade level. Many variables exist that also affect the readability of printed materials. For example, each student entering your class has a unique set of experiences, interests and needs, which affect the individual understanding and interpretation of the material. The book, itself, has features that affect its readability. Physical characteristics such as the type, size and clarity of print or the type and size of paper affect a student's motivation to read that particular book. The abstractness and density of facts, the organization and format of the text, and the reference guides also attribute to a text's readability.

Readability formulas calculate a book's approximate grade level. A score of eight would indicate the reading material is written for a student at the eighth grade level. Remember, though, that the formulas can only be used as guides. If a student is highly interested in the subject, his/her motivation will make the book more readable. Or, if the student has perceptual difficulties, it may be considerably less readable. As you can see, basing an assessment of comprehension solely on the results of readability formulas would be very ineffective.

Readability
The Fry Formula

1. Select 100 word samples from the beginning, middle and end of the book.* Don't count proper names or numerals; count hyphenated words as separate words. (Free-form would be two words.)

2. Count the number of sentences in each sample, estimated to the nearest tenth of a sentence.

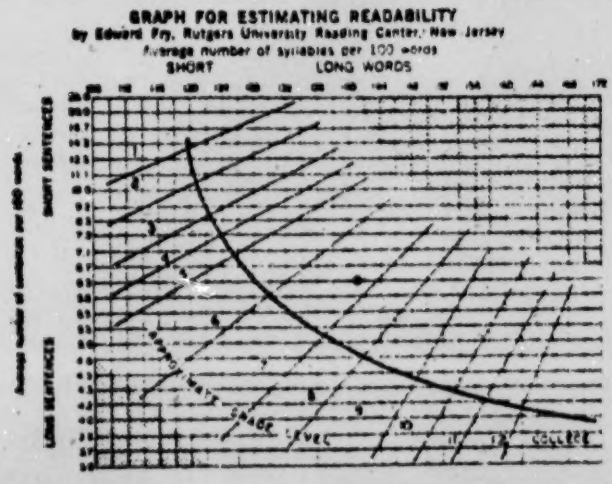
    1. Number of sentences in first sample (from beginning of text) _____
    2. Number of sentences in second sample (from middle of text) _____
    3. Number of sentences in third sample (from end of text) _____

3. Count the number of syllables in the samples.

    Count contractions as two syllables
    Count the ending -ed, even if not pronounced
    Count abbreviations the same as if they were spelled out
    Do not count proper names or numerals

    1. Number of syllables in the first sample (from beginning of text) _____
    2. Number of syllables in the second sample (from middle of text) _____
    3. Number of syllables in the third sample (from end of text) _____

4. Plot the readability scores (sentence length and number of syllables) for each of the samples on the Fry Readability Graph to determine their approximate grade level. The score of the first sample would indicate the reading level needed to begin the book. The samples from the middle and the end of the text would indicate the pace of the book.



* This formula can be used with lab books, handouts and references, as well as with regular texts.

Readability
The Smog Formula

1. Count ten consecutive sentences near the beginning of a text, ten sentences near the middle, and ten sentences near the end. (a sentence is defined as any string of words ending with a period, question mark or exclamation point.)

2. From this sample of thirty sentences, count the words with three or more syllables.

3. Estimate the nearest square root. To fully understand this text, the student must reach this reading level.

Number of 3-syllable words in first 10 sentences _____

Number of 3-syllable words in second 10 sentences _____

Number of 3-syllable words in third 10 sentences _____

Total _____

Nearest Square Root of Total _____

+3 _____

SMOG Grade Level _____

*
3 = the square root of 9
4 = the square root of 16
5 = the square root of 25
6 = the square root of 36
7 = the square root of 49
8 = the square root of 64
9 = the square root of 81
10 = the square root of 100
11 = the square root of 121
12 = the square root of 144
13 = the square root of 169
14 = the square root of 196
15 = the square root of 225

A. Comprehension
   1. Readability
   2. Cloze Procedure
   3. Reading Analysis
   4. Individual Reading Inventory
   5. Vocabulary
   6. Reference Skills

→ CLOZE PROCEDURE

The Cloze Procedure is a quick method of assessing a student's comprehension of a specific reading material. Simply, the Cloze procedure is a fill-in-the-blank exercise in which the student anticipates the answers based on context clues. Because of the nature of this device, it assesses the student's basic language skills and his/her knowledge of the subject. The student's motivation and interest in the subject also will affect his/her score.

To construct a Cloze:

1. Select a sample of 250-300 words from the beginning of the text.*
2. Leave the first sentence of this sample in tact.
3. Replace every fifth word with a standard-length blank.
4. Ask the student to complete the missing words in the reading. This exercise should be untimed.
5. Compare the student's answers to the author's original text. Add the number of answers that are exactly the same as the author's words. Don't worry about spelling.
6. Calculate the percent of exact correct answers by dividing the total number of answers by the total correct.
7. The results can be interpreted as follows:
   - less than 40% is frustration level. The student will probably find this reading material too difficult.
   - 40-60% is instructional level. The student will probably be successful using this reading material with some instruction.
   - more than 60% is independent level. The student probably could learn the information from the reading material without help. Supplementary reading and library books should be at this level.

*The same procedure can be used for lab manuals, workbooks, and handouts.

A. Comprehension
   1. Readability
   2. Cloze Procedure
   3. Reading Analysis
   4. Individual Reading Inventory
   5. Vocabulary
   6. Reference Skills

→ READING ANALYSIS

This reading analysis is an aid in determining the pace of the book or reading material. This information can be used to determine the amount of reading per assignment. The analysis also can be used to help the student prepare for the type and load of reading required in class.

This reading analysis is based on readability formulas, which consider sentence and word length, and the amount of technical vocabulary. In this analysis, words will be classified into three major categories:

General--words that are common in our everyday language.

Specific--general words that have special meanings in the particular field.

Technical--vocabulary unique to the field.

Using the words* from the cloze procedure, analyze each of the three samples for technical, specific and general words. Complete the chart on the next page with the information regarding readability and vocabulary. With this information, you should have an idea of the type and pace of the reading for this book.

*only use the words that were omitted from the cloze exercise.

Reading Analysis

	1st Sample Beginning of Text	2nd Sample Middle of Book	3rd Sample End of Book
Readability: Fry or Smog (Circle One)			
No. of Sentences			
No. of Syllables			
Reading Level			
Vocabulary:			
No. of words in cloze sample			
General words (%)			
Specific words (%)			
Technical words (%)			

A. Comprehension
   1. Readability
   2. Cloze Procedure
   3. Reading Analysis
   4. Individual Reading Inventory
   5. Vocabulary
   6. Reference Skills

→ INDIVIDUAL READING INVENTORY

Another method used to check a student's ability to comprehend a specific textbook is the Individual Reading Inventory.

To construct an Individual Reading Inventory:

1. Turn to the middle of the textbook; select a 200-300 word passage.

2. Develop a variety of questions related to the passage:

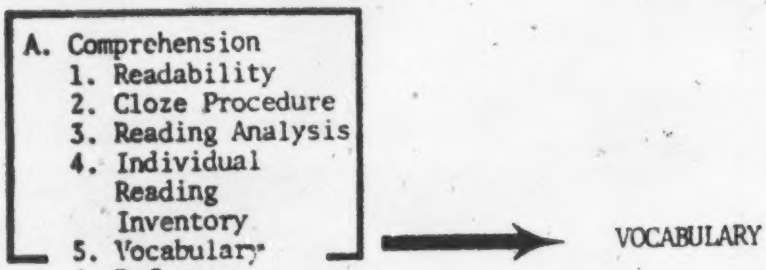
   - open-ended questions (What is the passage about?)
     This will give you information about the student's ability to organize and relate information, as well as spelling and grammatical skills.

   - objective questions (multiple choice, true-false)
     This will give you an indication of the student's ability to understand main ideas, details, relationships, as well as ability to follow directions.

   - matching vocabulary quiz.
     Through this exercise you gain insight into the student's ability to grasp new words, to derive their meaning from context and apply them in a different situation.

3. Ask the student to read the passage and answer the questions.

This assessment can be timed or untimed; open or closed book depending on the student, the textbook and the class. This type of assessment could also be used as an oral exercise. This could be especially appropriate for evaluating a student's ability to follow verbal instructions.



Vocabulary is one of the most important factors in reading comprehension. Vocabulary skills can be assessed with the cloze procedure, the individual reading inventory or with recognition type exercises. The vocabulary recognition exercise could be a list of specific and technical vocabulary from the first two weeks of the program. Or, to make it more interesting, a matching exercise could be made by matching the term with the corresponding definition, picture or example. An exercise in finding the meanings of each part of a word could be meaningful, especially in the medical field.

A preview of vocabulary serves several purposes. First, it tests the student's awareness of the terminology (and jargon) of that field. This indicates his/her career awareness; as an example, if the student does not recognize any of the vocabulary, he/she may not know enough about that particular field to make a good career choice. Second, the student has a chance to learn and use the initial vocabulary before he/she enrolls in the class. With this advantage, the student can concentrate on learning the concepts rather than the vocabulary.

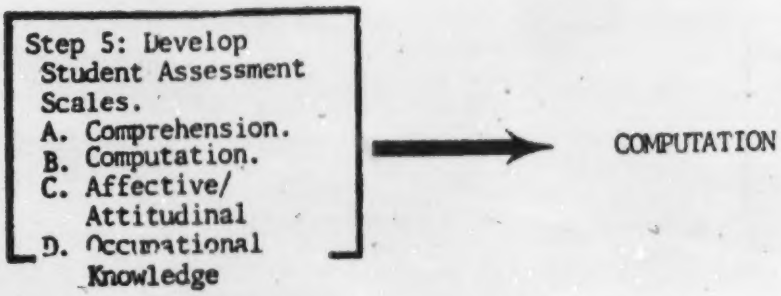
A. Comprehension
   1. Readability
   2. Cloze Procedure
   3. Reading Analysis
   4. Individual Reading Inventory
   5. Vocabulary
   6. Reference Skills

→ REFERENCE SKILLS

A Reference Skills worksheet has two purposes. First, it introduces the student to the textbook by asking search-and-answer questions. Second, it tests the student's knowledge and use of the book's information guides. More specifically a Reference Skills worksheet can help the student use:

- the Title, Chapter and Section headings of a text
- the Table of Contents
- Index
- Appendices
- Glossary
- Charts and Graphs
- Pictures

The worksheet should be given to the students at the beginning of the term. The worksheet may be used independently or in groups; it can be timed or untimed. Most important is the discussion of the answers and the process of finding those answers.



An assessment of student's mathematical skills is important to get acquainted with your students abilities. You may find a simple concept needs to be reviewed before starting the next step on the hierarchy of math skills. Or the students may be more advanced than your expectations.

Some math books have a pretest included in the introductory chapter. If it does not have a formal pretest, you may need to examine your curriculum to determine what knowledge is needed to enter the class. A cloze procedure of the math problems in the first two chapters of the text may give you enough information of the student's abilities. Or you could analyze these math problems to determine what skills are needed prerequisite to solving these problems.

Step 5: Develop Student Assessment Scales.
A. Comprehension.
B. Computation.
C. Affective/ Attitudinal
D. Occupational Knowledge

→ AFFECTIVE/ATTITUDINAL

Because success is often related to one's attitudes and values, an assessment of the student's affective skills could be helpful in preparing him/her for their future program. To assess the student's affective skills, determine the attitudes and values that relate to the specific occupation. The occupational teacher probably can list qualities of a good worker in the field. The D.O.T. (Dictionary of Occupational Titles) would give information related to the worker's orientation toward people, data, and things. (For example, a welder would probably have a high respect for a well-made product, but may not necessarily be extremely gregarious.) Of course, there are also some general work attitudes that can also be assessed. This could include such characteristics as confidence, persistence, pride, respect, etc.

Attitudes and values can be assessed with many types of devices. Listed below are examples of the most common methods:

1. *Direct observation* of the student to determine if the specific attitude or value is displayed.

2. *Closed item questionnaire* - forces the student to choose an answer that reflects his/her attitude.

   An employee has been caught stealing at work. This is the first time and the stolen items were valued at less than $100. What do you think should be done?

   a. The employee should be fired.
   b. The employee should return everything that was stolen.
   c. A conference should be held and the employee should be reprimanded for his/her actions.
   d. The employee should be supervised more closely.

3. *Open-ended questionnaire* -requires the student to complete a statement. This method is more reflective than a closed-item questionnaire.

   1. I would really like to _____.
   2. I dislike _____.
   3. I feel proud of myself when _____.

4. *Ranking* - can be used to help the student determine which values and attitudes are most important. A list is given to the student, and each topic is ranked in order of preference, the most important ranked as one.

	Rank
1. Challenge	_____
2. Independence	_____
3. Money	_____
4. Power	_____
5. Status	_____
6. Variety	_____

5. The *dichotomy method* - forces the student to agree or disagree with statements.

	Yes	No
Quality is more important than speed	_____	_____

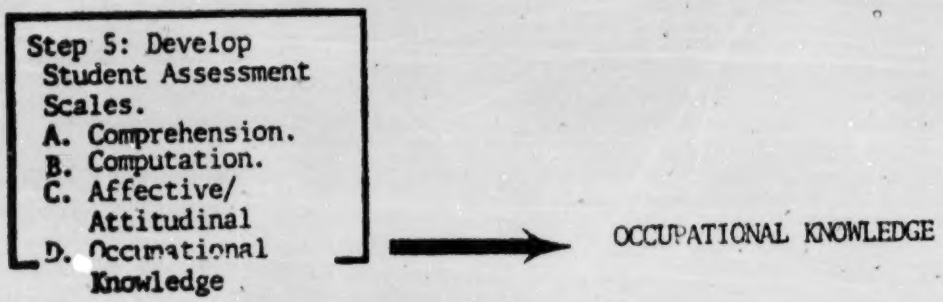
6. A *Likert scale* - is similar to the dichotomy, but gives the student opportunity to respond as to how strongly he/she feels about the statement.

	SD	D	U	A	SA
A worker should never be late for work	1	2	3	4	5
A worker should stay and work longer hours if there is a deadline to meet	1	2	3	4	5
A worker should work extra hard if there is a deadline to meet	1	2	3	4	5

7. A *semantic differential* uses a scale with pairs of opposite adjectives which measure the strength of the student's attitudes. The scale should be designed so each side has some positive and some negative items.

Welding

1. strenuous	relaxed
2. dirty	clean
3. easy	difficult
4. slow	fast
5. tedious	pleasant
6. variety	similarity
7. useless	valuable



The final step of the assessment phase is to develop activities for direct experience with the occupation and the program. The Curriculum Guide For Career Development, published by the Wisconsin Board of Vocational, Technical and Adult Education, has many suggestions for involving students in career exploration activities.

To capsulize, here are some major activities that could be included:

1. Shadowing-the ABE student is assigned to a full time student enrolled in the program. The ABE student "shadows" the student to find out more about the classes and the occupational field. With this activity the ABE student develops a consciousness of the daily demands placed on a student enrolled in the program. It also introduces him/her to a peer with similar interests, who may be willing to discuss formal and informal concerns of the ABE students.

2. Mini-course-an overview of the specific program and occupation. The mini-course includes information such as employment requirements, job duties and possibilities, as well as a hand-on experience related to the occupation. This type of activity conveys a lot of information related to the field and provides opportunity to try out one or more of the tasks of the occupation. It also introduces the student to at least one staff member of the program.

3. Career lab-if available, the career lab may have videotapes of work samples related to the occupation. If these tapes are purchased, be sure the content directly relates to the program in your school.

These examples are not inclusive. Many types of career exploration activities have been developed and effectively used. Activities should be chosen that are most appropriate to the school, the program, the occupation and the individual. A variety of activities would be much more effective than a single activity. Inherent with all these activities is the guidance of the instructor.

APPENDIX J

A SAMPLE PROCESS MANUAL
WELDING AT WWTI

THE WELDING PROGRAM AT
WESTERN WISCONSIN TECHNICAL INSTITUTE

Prepared by

Keith Valiquette

January, 1978

SECTION 1

Introduction and Overview of Welding

Introduction

The purpose of this manual is to familiarize you with the minimal and guideline competencies associated with the one-year Welding Program at Western Wisconsin Technical Institute. Hopefully, this material will enable you to provide much more specific program information to your students, and in turn, more accurately assess their chances for success in the welding program.

Welding Overview

Welding is a very diverse profession with unlimited opportunities. Most students who meet minimal competencies, and have good work habits as well as the desire to become welders, can be trained and employed in the field at various levels of responsibility. Qualified welders are always in demand. Jobs can be found throughout the United States and in foreign lands. Salaries range from above average to exceptional, depending upon the flexibility and skill of the individual.

The one-year Welding Program at Western Wisconsin Technical Institute includes arc, gas, gas-metal-arc, and gas-tungsten-arc welding. This is a comprehensive program designed to accommodate students of varying backgrounds and abilities. Each student pursues a program commensurate with his or her skills, with emphasis on the development of those talents which make them most employable in the field. Some students will be better welders than others, but at the program's completion all will be employable in some facet of the welding profession.

SECTION 2

Minimal and Guideline Competencies of Welding

Welding Entry Level Competencies

The experiences of the welding department faculty at Western Wisconsin Technical Institute seem to corroborate the following. The traditional three "R's" play a minor role in determining the potential for success an individual can experience in welding.

Far more important at entry are attitudes, work habits, and the following physical requirements.

(1) A potential welding student must be able to manipulate, handle, hold, and use the basic equipment found in a welding shop.

(2) Sight is very important, especially depth perception.

(3) Welding is a smoky, dusty, and dirty occupation. If a potential student is affected by such conditions, or has allergies, welding may not be a wise career choice.

Limited academic skills do not make an individual unemployable or untrainable as a welder, but it may restrict them to selected jobs.

Strong academic skills in combination with a fine work history and a solid welding background will provide innumerable opportunities for employment and advancement on the job.

General Skills Guideline for
Entering One-year Vocational Welding Students

It would be desirable, although not mandatory depending upon the circumstances, that a student entering welding possess the following skills.

SKILL	APPLICATION
Math: Use of ruler; addition, subtraction, multiplication, division of whole numbers; fractions; decimals	General measurement and fabrication work; judging distance; blueprint interpretation; determining weight
Reading: 7 - 8 grade reading level	Blueprint interpretation; manuals; codes and specifications; textbooks; handouts; general instructions
Writing: Knowledge of basic writing skills, e.g., subject-verb agreement, punctuation	Classroom assignments; shop reports; job resumes; employment applications
Listening/Following Directions: Ability to perform task(s)/follow shop procedures given verbally with a minimum of re-explanation	Majority of shop instructions given verbally

Comprehension: Reading, Speaking and Listening Tasks

Directions: On the list below, check all tasks that are needed in the occupational program.

SL = Slight
MD = Moderate
EXT = Extensive

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Reading									
1A. Forms		✓				✓			
1B. Charts and Tables		✓				✓			
1C. Notes, Letters and Memos									
1D. Manuals	✓				✓				
1E. Reference Books									
1F. The Newspaper									
1G. The Dictionary									
1H. Maps									
1I. Textbooks									
1J. Other _____									
Reading									
2A. Literal Comprehension . .	✓								
2B. Evaluative Comprehension									
2C. Interpretive Comprehension									
2D. Other _____									
Listen									
3A. Literal Comprehension . .			✓						
3B. Interpretive Comprehension									
3C. Evaluative Comprehension									
3D. Other _____									
Follow Directions									
4A. Oral Directions			✓						
4B. Written Directions . . .			✓						
4C. Other _____									

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Basic Writing Skills									
5A. Letters of the Alphabet . .									
5B. Copying Texts and Drafts .									
5C. Other _____									
Names, Addresses, Dates and Time									
6A. General									
6B. Other _____									
Forms and Job Applications									
7A. Write Phrases on Forms . .							✓		
7B. Write Sentences on Forms .									
7C. Use Correct Grammar . . .									
7D. Take Notes									
7E. Write Paragraphs									
7F. Write Internal Memos . . .									
7G. Other _____									
Letters									
8A. Form Letters									
8B. Business Letters									
8C. Other _____									
Speaking Ability									
9A. Give Information	✓								
9B. Conversation	✓								
9C. Use Telephone									
9D. Give Directions							✓		
9E. Other _____									
Organize Information									
10A. Sort Data	✓								
10B. Sort Objects									
10C. Rank Data or Objects . . .									
10D. Develop Classification . .									
10E. Other _____									
Tools, Equipment and Materials									
1A. Use of Tools and Instruments		✓				✓			✓
1B. Selection of Tools, Equipment and Materials		✓				✓			✓
11C. Selection of Procedures and Methods					✓				✓
11D. Analysis of Procedures and Methods									
11E. Other _____									

Math Tasks

Directions: On this list of math tasks place a check (✓) in the column that reflects the extent these math tasks are used during the first semester of the occupational program.

SL = Slight
MD = Moderate
EXT = Extensive

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Whole Numbers									
1A. Read, Write and Count. . .									
1B. Add and Subtract			✓						
1C. Multiply and Divide . . .			✓						
1D. Use of Calculator									
1E. Other _____									
Fractions									
2A. Read and Write			✓						
2B. Add and Subract			✓						
2C. Multiply and Divide . . .			✓						
2D. Ratio					✓				
2E. Proportion					✓				
2F. Other _____									
Decimals									
3A. Read, Write and Count . .		✓				✓			
3B. Add and Subtract		✓				✓			
3C. Multiply and Divide . . .		✓				✓			
3D. Dollars and Cents (Work with money, make change, etc.)									
3E. Other _____									
Percent									
4A. Read and Write	✓				✓			✓	
4B. Percentage Calculation . .	✓				✓			✓	
4C. Word Problems (Applying information to practical problems)					✓			✓	
4D. Other _____									

	Beginning: First Two Weeks			Middle			End: Last Two Weeks		
	SL	MD	EXT	SL	MD	EXT	SL	MD	EXT
Measure, Estimate, Calculate									
5A. Areas								✓	
5B. Perimeters								✓	
5C. Volumes								✓	
5D. Capacity								✓	
5E. Weight								✓	
5F. Distance									
5G. Time									
5H. Costs								✓	
5I. Other _____									
Measure									
6A. Read Graduated Scales			✓						
6B. Other _____									
Metric Measure									
7A. Distance		✓							
7B. Distance Conversion									
7C. Weight									
7D. Weight Conversion									
7E. Capacity		✓							
7F. Capacity Conversion									
7G. Temperature Conversion									
7H. Other _____									
Graphs									
8A. Read graphs and interpret	✓				✓				✓
8B. Draw graphs									
8C. Other _____									
Geometric Figures									
9A. Forms and Figures		✓							
9B. Angles		✓							
9C. Draw/Sketch		✓							
9D. Other _____									
Drawings									
10A. Read and interpret scale drawings		✓				✓			✓
10B. Draw to scale		✓				✓			✓
10C. Measure from scale drawings		✓				✓			✓
10D. Read assembly drawings		✓				✓			✓
10E. Read schematic drawings		✓				✓			✓
10F. Draw shop drawings		✓				✓			✓
10G. Other _____									
Algebra									

*DACUM Welding

General Areas of Competency and Sample Tasks

Competencies	Sample Tasks
1. Communicates and interprets effectively.	1. Listens and carries out verbal/ written directions, customer orders, orders supplies.
2. Maintains a safe, efficient work area.	2. Recognizes, reports, or corrects unsafe working conditions/ situations.
3. Uses shop tools and equipment.	3. Operates and uses a variety of power equipment, hand tools, and measuring devices, i.e., nibblers, grinders, bevelers.
4. Identifies metal to be welded, selects filler and shielding material.	4. Identifies metal by examination, welding, spark test, or magnet. Selects gas, filler, and shielding for specific metal.
5. Welds.	5. Preheats alloys, castings, metals, braze, oxy-acetylene, welds in various position.
6. Maintains and sets up equipment.	6. Selects and installs welding guns and torches, determines voltage and amperage settings.
7. Prepares and assembles material.	7. Determines joint and metal preparation, cuts material, welds, and flushes off excess weld.
8. Operates different types of welding machines.	8. Plasma arc, spot welders, open arc, mig.
9. Checks quality of work.	9. Checks size and accuracy of weld.

*DACUM Welding
(continued)

*A DACUM Chart identifies the general areas of competency for an occupation. Most tasks performed on the job fall into one or more of the competency areas listed. The tasks which appear on this chart are only a sampling of the possible tasks for each welding competency.

Each job is different and, as a consequence, it is not necessary that a student master every competency identified in order to be employable as a welder.

SECTION 3

Required Courses of Welding

SECTION 4

Sample Course Materials of Welding

SECTION 5

Resource Persons for Welding

Resource Persons for Welding

Anyone who desires additional information on the welding profession or the Welding Program at Western Wisconsin Technical Institute should contact the following welding instructors:

Robert Durall

Wayne LeMar

Bill Van Riper

Alton White

These men can also supply information on tri-state employment opportunities, placement, salaries, and general working conditions. They have day-to-day contact with employers seeking qualified welders. As a consequence, they are in an excellent position to judge the condition of the job market for welders at any given moment.